

Mr. Snyder forwarded me the following letter from L. C. Bent dated Salt Lake the 7th:

"Yours of the 3rd and 4th came from Wahsatch this morning. I have a man out on the C.P. and expect to get a report in a few days; as soon as received will send copy to Gen. Dodge and to you. The message has to be sent from Ruby Valley across to the road, one hundred and fifty miles. I did not arrange for the messenger to stop there but to return with his report. I will arrange so as to have a trusty man kept there and send his reports direct to Washington.

From the best information I can get, the C.P. track is 40 miles west of Humboldt Wells and they are doing little or nothing in advancing it. I think there is but little doubt but the U.P. will build 100 miles west of Weber Canon, the grading can be done, the only hold back will be tied and iron. The C.P. are very sick about this time for they have made a big hand out for a darned small wash in the way of track-laying. Those five hundred Chinese and 1600 teams represented as being at work east of Humboldt Wells was a thing well put up for the Washington market, but it won't pan in the end. If the U.P. can hold out in funds, keep the credit good it is will have those chaps where the dog had the hen. If Congress will only put that Special Commission on the Central, they are played. I have not the least doubt but what they have 130 ft. grades with any amount of sharp curves on the line, that won't stand the pressure.

I think the Doctor will make it hot for the Reed and Seymour ring this time. I gave the Doctor some items that opened his eyes some. Reed and Mark Seymour gave Gosselini an unlimited letter of credit to Hussey, Dalher & Co. He has drawn out \$10,000 on it. Bates is mixed with him. Bates and Gosselini have \$15,000 out of same bank. I ordered Hussey to make a clean breast of all the transactions to T.C.D as he was the only man that could save him. I am looking for a grand crash in the construction department. When Bates' head went off it made the hole ring shake. Brigham took off his hat and hoped that Capt. Bates had not gotten into trouble. I tell you Snyder there are but few honest men in this world, but modesty forbids me to mention one of them."

We were keeping close watch upon the Central Pacific movements. I had organized an investigating force both in Washington and in the West so as to know what they were about, and every movement they made was known to us.

Mr. Snyder wired me that they had reached the 1000 mile post with the track on the 9th and that commissioners had gone forward to examine the completed road up to the 1000 mile post and was to send a report on it as soon as they received authority from Washington.

On Jan. 8th I received the following letter from Mr. Oliver Ames from New York:

*Jan 8th*  
"We have a letter from Browning today saying that our line must be located on line of Central Pacific from Echo summit to form a continuous line with theirs, a copy of which I send you. Is there no way for us to avoid this, and are we to lose our subsidy on account of the line of Central being located in advance of ours? If this is to be so, we better give up our road where it is and stop our work. I have no idea of doing this as Browning

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desires. He evidently wants to force us to give up our grading and take that of the Central and build our road on their line or lose our subsidy. The old hypocrite! I thought when he was saying to us that the location of this line in advance of ours gave them no rights he meant what he said, and would simply ask that the roads should be joined when they met.

You must get some immediate action of Congress to have this matter put right and not let our line be sacrificed in this way. The idea that men like Browning are to sit in their office and fix the line on which these roads shall run when they have not seen or examined the line of our road nor know anything of it or either of them. I see no way for us to act if Browning's action is sustained but to withdraw our forces and wait for Central to build the road. We can't go on without the subsidy and if the subsidy is to be applied to their line we must pull up our track and put it on their line or quit."

1869.

On Jan. 8th Mr. Ames wrote me again as follows:

*North Easton*

"I wrote you today to Washington, but not knowing but you may still be in New York I want to say to you that some positive action either with the President and Cabinet or in Congress should be at once taken to have this line fixed.

It would be infamous for such action as Browning is taking to be sustained, and your documents can't be used too quick to show him up in Congress. Our hope is in Congress. The cabinet will be too deferential, to the head of the Interior Department just now that its corruption is being exposed, and this action of Browning shows that the head is corrupt."

The action of the Secretary of the Interior was creating a great deal of discussion among the members of Congress and the Senate and I was utilizing it very effectively. It was very evident to everyone that there was a nigger in the wood-pile somewhere; that this effort of Browning to put the location of the Central Pacific Railroad over the line we had already ~~over~~ located and partly built over was beyond all reason. We were fast nearing Ogden. The Central Pacific was still 150 miles West of there and still the Government was allowing them to file a map and have it adopted over a country which we had filed a map on long before they had and their orders to us to adjust our road, which was already built, to their location, was simply nonsense and I proposed to bring it up in Congress unless an adjustment was soon made.

As heretofore stated, Mr. T. J. Carter had been making a thorough examination of the Central Pacific and upon January 8th he sent me the following report:

*Wilmington, Del.*

*June*  
"Yours of 5th inst. is at hand requesting information upon Central Pacific R.R. and comparative merits with Union Pacific R.R. I will answer your inquiries briefly though no doubt detailed facts would be more interesting which the limit of a letter would not admit.

In my examination of the road, work and structures when there in August last had favorable opportunity to witness all departments of the work in progress, as that completed and in use. The officers and engineers received me cordially and were ready to impart any desired information, and I obtained several maps on large scale showing the location of the road, also the terminus at San Francisco. which may be important for you to examine to illustrate my views:

1st: Ballasting--the portion of road across the bottoms near Sacramento is only partially ballasted, the mountain portion is well ballasted with broken stone and coarse gravel-about 20 miles near "Humboldt Sink" is composed of "alkali" soil and not ballasted when there, and must be done with trains after track was laid. The other portion of the line appears to have a road bed of sand and gravel not requiring ballasting. Many of the cuts in the mountains are composed of hard-pan or cemented clay and sand, that the slopes are nearly vertical, the road bed was ballasted from the vicinity as there is abundance of good gravel along the line suitable for ballast.

2nd. Machine shops and stations--When I was there the only shops were temporary frame structures, small, entirely inadequate for the purpose, and nearly all the work was done out doors-the tools and machinery occupying most of the buildings, and the Master Mechanic informed me that he labored under great disadvantages in his keeping the rolling stock up with such facilities. These shops are at Sacramento, where the foundations of engine house, machine shop and car shop were built and the brick work commenced; about the size of Omaha shops and like them, located about a mile from the prospective requirements of a through line to San Francisco.

Those are the only permanent repair shops that were in progress. It is intended to have shops built at Wardsworth, 192 miles east of Sacramento at "big Bend" of Truckee River near the east base of Nevada Mountains; also will build engine house at summit. There is an engine house built of stone, 27 stalls, 14 miles of east of Sacramento near west base of mountain and the only permanent structure on the road in buildings.

The passenger station at Sacramento is a large frame shed at steamboat landing, having only a ticket and freight office in it for clerks, &c. The way stations are rough frame buildings; several of them were used as terminal stations in progress of the road, and now mostly closed up as not required for local business. At Cisco is a very comfortable eating house, also at Maryville Junction. All the stations are much inferior to those on U.P.R.R. and much less facilities for repairs.

3d--Bridges and trestle work: The longest structure is over the Andrieve River a few miles east of Sacramento about a mile in length mostly trestle work, except 3 span of Howe Truss at the channel on trestle piers. That bridge was overflowed last spring 4 feet deep, and when I was there they were raising the whole about 6 ft. to avoid future floods. On the west slope of the mountains are many high trestle and Howe Truss bridges from 20 to 80 ft. high, 100 to 500 ft. long without any masonry, but the trestle piers arranged that it may be put in. On the east slope most of culverts, piers and abutments are stone. The bridge over Truckee at Big Bend is Howe Truss 600 ft. long on trestle piers- a temporary bridge 30 ft. below grade was in use there till the new bridge was completed. Several of the trestles are upon steep grades and sharp curves.

#### 4th--Alignment.

The line seems to have been judiciously located over the mountains, where very heavy work in rock and earth has been done. There is more curved line than U.P.R.R. and from 6 to 10 curves in many places upon the maximum grade 116 ft. per mile of which there is 9 miles in succession and curves of ten degrees on the west slope, less on east slope,-by reversing and running up one side and down other of ravines in canons to increase distance. The line in Humboldt Valley is less curved yet has been adopted to save work, and some grades of 80 ft. are used east of Truckee River, and such undulations as would save cuts and fills.

The track is well laid and in quite good order 2400 tons per mile rails 64 lbs. with fish joint, then for 200 miles. Their system of laying track differs from U.P.R.R. by which it can be done more rapidly and accounts for 6 to 7 miles per day at times; though average 2 to 3 miles. They do not lay track to any grade or set any grade stakes, but put it down on the road by omitting half the ties, which are put in after and saves teaming them. A gang of men are kept to put in the other ties and surface and ballast track when the material is suitable. They employed double gang of men on track, one set from 4 to 12 o'clock, another 1 to 8 o'clock. Almost the entire force are Chinese with American overseers, and the Chinese are very good for the purpose, wages about \$1.50 gold-who live principally on rice and vegetables, and they are employed on repairs of track most exclusively.

There is one fact I learned in regard to snow sheds. They had 4 miles last year and are erecting 20 more which they say and appear will protect the road from snow in the mountains.

There is, however, an important subject to consider-if the general route could not have been located to avoid the "snow region" via Beckwith Pass which information I obtained from a reliable source, that such a route can be selected with less grades, lower summit and shorter distance.

The terminus at San Francisco is also important for all traffic to select the best, "Govt. Island Vallijo" or other points are examined, and have maps to show comparison.

I have endeavored to give you the items you wished, but if it not intelligible or if you wish further information or explanation, write me and I will give more details from my notes on the subject."

On the same date I received the following from Mr. House in relation to the towns along the line:

*Omaha, Neb.*

"Yours of the 4th came to hand this morning. Immediately upon the receipt of your telegram ordering the laying out of the Salt Lake town, I telegraphed Salt Lake to find out what had been done. Mr. Blickensderfer replied by telegraph of which you have a copy. I have not heard from him since. I started Eddy out as soon as I could after getting up the monthly statement. O'Neil did not get your instructions at all, as I now understand it, but he is in Salt Lake Valley at work. When Eddy arrives we will get a full report of everything.

I have been annoyed beyond measure on account of the Wahsatch town. Williamson saw Snyder and Dr. Durant on the 26th of December and nothing was said to him at that time that a change of terminus was contemplated from Evanston, consequently when as he supposed everything was settled at that place, and his business in proper shape, he went home to spend New Years. On the 29th I received telegram from Snyder asking where Williamson was, telling me that they were ready to sell lots in Wahsatch and wanted an agent. I supposed at that time that Williamson was in Bryan and telegraphed him to go to Wahsatch at once. Hearing nothing from Bryan that day, I supposed he had gone. On the 1st of January a letter came written at Boone and dated 30th, that Williamson was on his way to Des Moines. I telegraphed him that he was needed at Wahsatch at once. He replied that he would start on the 4th. In the meantime Snyder kept telegraphing me about the agent &c. saying matters were getting mixed up, town was ready, &c. I found that Williamson could not get there in time, tried to find O'Neil and learned that he was in Salt Lake, sent there by the Doctor. Vedder was between the end of track and Cheyenne getting up the information wanted on sidings, buildings, etc. Evans had told Harding that he thought there would be nothing done by the commissioners for the next 30 days, and that he also could make a short visit East. Harding arrived here on the morning of the 1st and I sent him back the evening of the 2nd to Wahsatch with instructions to sell lots and attend to the business till Williamson arrived. Harding arrived there on the 5th and telegraphed me that the town was not properly laid off that he would have to do it all over again.

I write thus particularly that you may see that I did all in my power to meet the requirements of having the town started as soon as possible. I asked Mr. Snyder to let one of his men act till I could get a representative or appoint some one there. He replied that his men had all that they could do without attending to town lot matters. I was as well aware of that before he told me as after but thought he might accommodate for a day or two and not suffer by it if he felt so disposed; he continually representing that the town was suffering for the want of an agent. As it is, Williamson, will be on the ground before the town is ready for him, at least.

*1869*  
On Jan. 10th I received the following letter from Mr. F. M.

Case on the coal in the Platte Valley. While there were these veins of coal in the Platte Valley, the trouble was they were so small in carbon that they were not marketable or fit for engine use:

*Denver, Colo.*

"About a year ago I wrote you saying we had discovered good coal on the east side of Platte close to my R. R. location. You were inclined to doubt coal being found in any considerable quantities. This vein described in the Tribune article was found nearly a year ago, 37 inches thick. This winter in digging a hole to let the water drain into 18 inches down they struck coal again and now it is developed to be 7 1-2 feet including the 1 1-2 ft. of carboniferous strata which burns. There is over 5 1-2 ft. of good solid coal.

I have made this coal question a study, particularly the rocks in juxtaposition. The Cheyenne coal is in a higher coal series. The white sandstone in immediate vicinity geologically of the good coal, crops out several hundred feet geologically below the Cheyenne coal beds, in the valley of Lone Tree Creek. No one has ever prospected there for coal. The same sandstone, supposing it to be horizontal would be 500 ft. below Cheyenne City. Then I have another theory in relation to it, and that is that our best coal will not be found more than 20 miles distance from the foot of the high mountains; that the action of the heat or pressure or both at the time of the upheaval has made the coal of better quality. I have for this theory only the fact that coal has been found very abundant out on the Kiowa, Bijous and Sandy, yet no good coal has been found. It is a brown lignite imperfectly carbonized.

The only coal yet found that will coke is down on the Arkansas River-some 10 miles below Canon City.

The same external indications of coal that are on the surface at this coal mine of on the line of D.P.R. extend this way in the bluffs for ten miles and more."

Up to this time, these veins of coal had never been worked.

*1869*  
On January 11th, Mr. Blickensderfer received his appointment

for the examination of the Central Pacific and wired me that he had closed his accounts, paid off his parties, etc.

*1869*  
On January 11th, Mr. J. L. Williams wrote me as follows:

*At Wayne, Ind.*

"I have yours of the 5th. I regret that the company did not put up Government bonds instead of first mortgage. I understand you to say that on the final estimate from Green River to mouth of Weber as per return of quantities the cost of grading is \$25000 per mile.

I am astonished at nothing that comes from Durant in the shape of large estimates. I have not the slightest confidence in any engineer that will act under his immediate direction. You recollect the

Black Hills? Durant showed me estimates with 100,000 cub. yds of solid rock, from one horseback journey over it. I felt authorized in my estimate to reduce it more than half. In constructing the work there was not really one tenth part of the rock he and his engineers estimated. He also said to me that there would be 1600 ft. Howe Truss bridge on Lodge Pole making about a dozen crossings. It had no effect for I have seen you fixing the location when at La Porte. I knew there were but three crossings.

If any Committee of Congress wants my view of all these cases under oath, I shall say exactly what I say now. You and Dillon heard me say to Durant in New York last summer that "I knew him (Durant) perfectly" and that he would never have an engineer in his employ, if he could help it who would not make reports just as he should order him." Since the Executive Committee on the 2nd of July last, Duff, Lambard, McComb and Brooks passed that order which was sent to you at Bear River by telegraph, putting the locating engineers under Durant's control. I have had no faith or hope in their operations. The Executive Committee deserve to be swindled out of two millions as they will by Durant. Still I sincerely regret their embarrassment and hope the company will get along with our great sacrifice. I have no doubt that in their tremendous push through the fall and winter the grading on the Black's Fork and the Wahsatch has cost a great deal more per yd. than it should. but that is no good reason why Durant's engineers should double up the quantities of rock, haul, &c. If it should ever be measured by disinterested engineers, it would be found that the quantities are not as now reported at the office. If there had been such a vast amount of rock they could not have done it so soon. If is all bosh. This extra cost of work they may make up if they can secure the building of another 100 miles thereby.

I saw Evans last week in the cars. He says they are building stone abutments on the Weber, leaving the wall dry to be grouted afterwards by pouring it in from the top. Gout will not run down more than two or three courses, so it will always be dry masonry.

Have the goodness to send me as many of the pamphlets containing my report as you can. A number of my railroad friends want copies.

I want very much to see the engineers report of the Northern Pacific and also the Southern Pacific or the Santa Fe Route. What I want particularly is the elevation of the summit of the mountains. Am looking in the Physical Geography for that portion of the continent and want to compare the elevations of the whole range.

Tell me whether you think any P.R.R. subsidies will pass this winter and if any which routes.

Whoever of our Directors suggested the plan of letting the work to themselves at such enormous prices, thus making the company poor did the mischief. No company can long have the public confidence in that way."

of Jan. 1869

Mr. L. C. Bent wired me on the 11th that the Central Pacific road is finished today to Bishop's Creek, 14 miles west of Humboldt Wells or what is now officially called Tulasco, 506 miles east of Sacramento. The C.P.R.R. graders west will join grading parties east on the 15th inst. making a continuous line east to Monument Point all but two miles which will not retard the tracklaying. Grading on the Promontory is progressing very satisfactorily."

1869

On Jan. 11th I received the following from Mr. Blickensderfer:

Salt Lake City.

"Your telegram of yesterday from New York advising me that Warren and myself were appointed to examine C.P.R.R. reached me this morning. Stanford and Grey are both now in the city but probably are not yet advised as they have said nothing to me about the matter. I shall wait until they approach me.

I wish it were not winter, as during this season of the year it will be difficult to form a good opinion of the work. We ought to see the line when the ground is free from snow. I will pass over the line from mouth of Weber westward if possible continuously to end of C.P. track and if Warren will do so will take him over the line also. I hope your instructions will not only justify this, but require it. I have heretofore written you my views pretty freely.

My accounts will all be closed before I leave here or if any remain it will be Hudnutts and my own personal accounts. My report I will endeavor to get done but may not quite succeed as I have been so much occupied with my accounts, and the material for the report is so much scattered that I sometimes fear that I cannot get it done. If Warren could give me a little time before he comes West I could probably finish it.

O'Neil arrived here yesterday. He says he has instructions from Durant to run section lines, and if necessary to begin at Temple block in this city. He says he will begin here and run north so as to enable him to be certain in identifying the numbers of the sections and then connect with McCabe's work. Moberly is also here with his party. I ordered him in to pay him off and disband his party. Today I telegraphed you to know whether this was right, but if your answer does not come will discharge the party at all events, as I understand from your desire to diminish expenses and from the fact that McCabe and Moberly only took up this work because O'Neil did not arrive, that so soon as O'Neil appears the other party is to be disbanded. O'Neil says he has but one two mule team and wants transportation. I have therefore decided to give him one of Moberly's teams, the best and will sell the rest. When this is done everything will be closed up here, and Morris and O'Neil's parties the only ones left. Will write fully about the disposition of the property when I get done. McCabe was paid off and went East soon after I came. Morris has gone north, taking Ricksecker with him and established an office at Brigham City. He took with him every paper and note in the office relating to the line west of mouth Weber Canon.

I learn the weather in the mountains east of this has latterly been quite stormy and there has probably been trouble with snow but to what extent I have not learned. The track on Saturday was within about three miles of Echo City. Grey told me a few days ago their track was about 25 miles from Humboldt Wells. We have about 6 inches of snow here in the valley, but the weather is mild and it thaws very quickly. Stages run to Hardy's 14 miles out and then sleighs run to the new town of Wahsatch on the summit at the head of Echo. I think their switches do not work very well, but did not see them operating."

1869

On Jan. 14th I received the following from Mr. Morris: *on his re-survey of Promontory Point*

"I reached here day before yesterday with my party.

I have received no further instructions from Durant. I am running a line with 100 ft. grade down the ravine used for temporary 116 ft. grade line. I will use no curve less than 6°. Will forward

to you results as soon as obtained.

I rode over most of the line from Bear River west and examined most points where work was going on east of Bear River of both the U.P. and C.P. Companies. From Weber Canon to Ogden there is a large force at work on the U.P. Almost every point of any magnitude is opened and twenty days should close it up."

1869  
On Jan. 15th Mr. Oliver Ames wrote me as follows:-

"I have your favor of today and most heartily sympathize with you in your indignation at the course of Durant. I have telegraphed as you suggested that no alteration be made in the line of road as finally located, and have also written Durant a letter enclosing him a copy of the instructions of Browning. I think he will do what he can to remedy any changes he has made in line. Durant has been as furious in his demonstrations as any one could well be generally but has till now made no important changes in your line.

I think we may find when commissioners get out there that the changes may not be as radical as you now suppose. I know that Durant has wanted to take the full charge of the line and have it run to suit his notions, which are to conform the line to the surface of the country with grades and curves up to the limit of the law. But the strong support which your line has received from our Board has prevented changes. I hope you will feel that though the Dr. may want power and exercise it without judgment frequently, yet the board of directors are strongly your friends and I hope you will not let your feelings against Durant lead you into any demonstrations against the road.

We would like to place you in some position on our road where we could have your influence in Govt. of road after it is completed. If you will write to Blickensderfer in let the location conform as nearly as possible to location, and these changes that Dr. has made to save time and get ahead of the Central, we will change hereafter, but now we better let the changes be accepted where the line is not radically bad."

As soon as Dr. Durant learned of the new commission to examine the Central Pacific, he abandoned all idea of changing my line and the line which we were at work on, the 80foot grade line over Promontory Point was built. As Mr. Ames says in his letter, he made a great fuss talked a great deal, but accomplished nothing. I made no protest in the matter after writing the company, knowing the Government would never accept a single foot of line that he would change. I also told that confidentially by the Interior Department, and I was satisfied the Commissioners themselves would throw out any change which he made.

1869  
On January 15th, I wrote him the following letter:

"I submitted my location to the Company west of Salt Lake and over Promontory deciding upon the 80 ft. grade line as the best. I have seen nothing to change my views. The Company also submitted the same line and profile to special commission when they went out and filed it with Secretary of Interior here. If the Company see proper to change it, they have full power to do so. In my opinion, at this time, it would be very bad policy and very detrimental to the company. I have sent no instructions west to engineers except those the President directed me to, and the matters that keep me here are solely the business of the company and in all matters I have acted by order of the President and am here carrying out his orders.

The Central Pacific Company over Promontory are building their line on a 90 ft. grade. If we use a higher grade we have no show to get our line accepted here and the special commission will certainly

report against us. The estimates on all lines show at the outside a difference of only \$200,000 in cost while the commercial value of the road is in favor of 80 ft. line."

1869  
On January 16th, I wrote to Mr. T. C. Morris as follows:

Washington

"I am in receipt of your letters of Jan. 2nd, 5th and 7th and your course is satisfactory to me. Mr. Durant has authority from the Board to direct such surveys as he deems proper. I desire to present to the Company a line that in an engineering point of view and a commercial point is the best line, if they see fit to adopt other that is their privilege but with the determined fight here and the critical scrutiny they give everything we now do, any other line would not be apt to be adopted, except for temporary purposes. I desire to be kept fully posted as to your surveys and conclusions, also, with the doings of C.P.R.R. They have been playing a desparate game here but have so far been defeated, and always will be if our company preserves the proper course. As soon as you complete your surveys, it is my intention to place you in charge of a portion of completed road, on repairs. I suppose the discharge of McCabe's party gives you only your own to look after. O'Neil will be on town surveys and be probably through by time you are; however, all matters pertaining to my Dept. you want to look after, O'Neil is directly under orders of Mr. House, but anything that you consider should be done or any change made, he will comply with your arders.

What kind of a line have C.P.R.R. over Promontory Point?

I have no doubt that the Commission sent out by the Government Warren, Blickensderfer, and Williams will decide upon my location through to Humboldt Wells. They certainly cannot decide upon C.P.R.R. location. If commission desires any information from you give it to them promptly. I have ordered turned over to them the map and profile of the adopted location from mouth of Weber to Humboldt Wells which I filled here, it has all the improvements made on line by you and others and is the 80 ft. grade line over Promontory, and it is the best line in an engineering and commercial point of view that has yet been submitted to me. If you succeed in getting a better over Promontory, I shall be very glad of it, but I doubt if the country is there to obtain it in. You say 90 ft. line with heavy work costs \$200,000 less. Is that after deducting cost of three miles of extra distance, rails, ties, &c? There is a question I would like your views on. At Green River we use 60 ft. grade and great curvature. We have to use a helper over it as trains from Rawlings Springs to Green River hauls more cars than they can over that summit. If we had used minimum grade, less curvature, and less cost of work would not the same power we now have to use been adequate? The question is, what is true economy on a grade when we have got to put on additional power? The same question rises on rim of basin and the argument against it is that we have virtually gained nothing by our extra cost of line to obtain a 60 ft. grade, when we have to have a helper over that. For the trains used on that division, helper would take trains over 80 ft. grade as well as 60. A case like this presented to unprofessional minds, especially when interested in having little cost as possible, weighs heavily against the true engineering question. It is one worth studying, and it is well for us to as ably treat as possible."

1869

On January 17th, I wrote Mr. Ames as follows:

Washington

\* "Mr. Chancy Snow, Government director, U.P.R.R. is enroute to make a personal inspection of our road. He visits New York for the purpose of obtaining some information before going out west and may desire letters of introduction to our Supts. of Depts. west. I bespeak for him that courtesy and aid that will make his trip a pleasant one, and would suggest that passes be obtained for him from New York to Chicago, from there West, I have provided them."

On February 1st, C. H. Snow the Government Director wired Andrew Johnson, President of the United States, as follows:

"I do not think any more money should be given to the Union Pacific until it is better constructed and managed better."

On <sup>Feb.</sup> <sup>1869</sup> Mr. Snyder wrote me that "our Government Director

Snow is making a fool of himself, but he cannot get a cent here."

He was endeavoring in every way possible to make Snyder come down to him, but I had written Snyder to pay nothing, under any circumstances.

On <sup>Feb.</sup> <sup>1869</sup> J.W. Davis, <sup>The Contractor</sup> telegraphed to Mr. T. C. Durant as follows:

"Private conference. Snow wants coal contract two hundred tons per day at six dollars. This will make all right if I am authorized to pledge it. Regard this as very important to you. Answer."

On <sup>Feb.</sup> <sup>5th</sup>, Mr. Snyder wired me that Snow was at Piedmont in the hands of J. W. Davis trying to make a bargain." I can only repeat what I have before written that I cannot deal with the Davis outfit; that the thieves must get out or I will next month."

On <sup>Feb.</sup> <sup>12th</sup> he wired me that "Snow was at Cheyenne yesterday; will be here tomorrow. I don't think he made the coal contract work."

On February 3rd, Mr. Snyder wrote me as follows:

"Yours of January 29th at hand this morning. I am looking closely after the movements of all my heads of departments and clean out as fast as I discover defections. Have not been able to fill every office with exactly such men as I wished, but by watching constantly all points, think I have been beaten but little. My policy has been to promote hard workers and honest men. That is an impetus to others in subordinate positions and can do more with a man who has worked his way up than with dandy R.R. men from first class roads in the East, who know nothing about work or the difficulties to be encountered in this country.

From Bryan to Wahsatch it will cost an average of \$4000 per mile to put the road in good shape. From Aspen to Wahsatch our trains make but 6 miles per hour on account of condition of road bed.

I have been trying to get all Salt Lake and other freight through fast as possible. Durant's operations prevented it. By this action everybody has been swearing at us; many merchants have been nearly ruined and our enemies have got good argument against us.

Tracklaying has not been advanced one foot because we have caught graders twice west of Aspen and the whole institution has been demoralized. As I said last night in my letter, I am utterly sick of this style of work, and will get out unless there is absolute certainty of a change in March.

No. 2 - 3.

This morning's dispatches inform me that we have unloaded at Echo City, 150 cars iron, 100 cars ties and large amount of subsistence stores for contractors. We have accumulated at Wahsatch sufficient stores for the contractors between there and Castle Rock to last them until completion of work on permanent line.

Chesbrough & McGee's rock cut will be out Friday 5th inst. and tracklaying resumed.

Dont think we will need commissioners again until after March 4.

1869

On January 17th, Mr. H. M. Hoxie, the Assistant Superintendent of the road, wrote me as follows:

Quaker.

"Mr. Snyder at Wahsatch. He has telegraphed you about track etc, and I suppose wrote you. If Dr. Durant would now stop all track laying at Echo, give the men and animals on construction time to rest and reorganize and permit us to build the road, Bryan to Echo and accumulate material at Bryan and Wahsatch until spring opens, we would have more miles of track July 1st than we will under present arrangements and save one million of dollars. The track from Bryan to Wahsatch is laid on frost, goes down all the time - 4 miles per hour is the maximum speed allowed and then we are off the track about 1.2 the time. The iron will be worthless by spring and there will be no road left.

Water in Bitter Creek country is destroying all our locomotives It grows worse every day. Had ten dead engines last week, on one day cause want of water and what we had was poor. About 1-2 of water power on that division is in the shops that act. We are so hard up financially that I dare not build tanks here. Paymaster not yet over the road for November. Men growling, striking, and generally demoralized.

The presence of Silas Seymour at Durant's heels and putting all kinds of foolish notions in his head will yet ruin the company. Millions of dollars spent for naught to simply gratify Seymour. I never have written you this before, but I feel it my duty."

1869

On Jan. 16th, Mr. Blickensderfer wrote me from Salt Lake as follows:-

Yours of 6th reached me today and I will frankly acknowledge that it was some gratification to me to be assured that the balance of your people do not participate in the feeling towards me exhibited b Durant and Seymour. The little depression I felt when I received the Dr's. communication has, however, long since left me, for thought I was justified in considering it as emanating chiefly from Seymour.

Your messages of the 10th and 16th have advised me that Warren and I are to go to the Central P. line but except that I infer from the fact that map and profile from mouth of Weber West is being prepared for us, that we are to examine that line, I know nothing of our duties of a specific character. I presume Warren will bring instructions.

I regret to hear that the work west of Green River has cost so largely, but I am not so much surprised at it as some probably will be. There is no doubt that the thing has been mismanaged and that the same results could often have been obtained at a greatly reduced cost; but in addition to this I apprehend a thorough investigation would show many things which would surprise some of our good people at the East. It cannot be that rottenness has never visited Echo City and its vicinity.

My accounts are about all settled here and only a small amount more will be required here, unless Hudnutt wants more at this place. There is not a single man here now under pay outside of Morris and O'Neil's parties and everything paid off to date. I could leave for the East in 2 hours, if necessary.

I can fully appreciate your feelings when you say you are out of heart at the present state of things on the road for it is sickening to see matters tending so dangerously towards utter destruction, and what excites my wonder is that such men as Ames and some others could not foresee this last summer. I fear the C. R. folks hereabouts see the way matters are working and are delighted at the management which tends to such results.

I hope I shall in a few days hear more fully from you in regard to our visit to the C.P.R.R.

"Where shall I present account for services as commissioner, at New York office or at Omaha?" B41818

1869

On Jan. 18th Mr. Blickensderfer wrote me in relation to my answer to Secretary Browning as follows:

*Salt Lake City.*

"Your answer to Browning is good, and so far as I am able to judge, there is not a statement in it which cannot be substantiated. I am afraid your company will regret that they placed so much in the hands of Durant, for I am very much inclined to think the U.P.R.R. Company would occupy much better position in Washington if that same Dr. Durant were a less prominent feature in the concern, besides I am strongly inclined to think he not only adds nothing to the credit of the concern but really detracts from its credit in spite of all his reputation for energy and administration ability. It is currently reported out here that the U.P. Company is hard up for funds and several months behind in payments to contractors, and true, or not true, I fear it is working you great injury and adding much strength to your opponents."

I had obtained an order from the Secretary of the Interior for the Commission which had examined the completed road to examine the road as far as the track was laid, and I immediately wired Mr. Durant to report the sections as fast as completed to Mr. Ames, officially, and that the Secretary of the Interior had ordered them examined.

~~On the~~ 16th I wrote Mr. T. B. Morris as follows:

"I am in receipt of your letters of Jan. 2d<sup>6</sup>th and 7th and your course is satisfactory to me. Mr. Durant has authority from the Board to direct such surveys as he deems proper. I desire to present to the company a line that in an engineering point of view and a commercial point is the best line; if they see fit to adopt other, that is their privilege, but with the determined fight here and the critical scrutiny they give everything we now do, any other line would not be apt to be adopted except for temporary purposes.

I desire to be kept fully posted as to your surveys and conclusions; also with the doings of C.P.R.R. They have been playing a desperate game here but have so far been defeated, and always will be if our company preserves the proper course. As soon as you complete your survey it is my intention to place you in charge of a portion of completed road on repairs. I suppose the discharge of McCabe's party gives you only your own to look after. O'Neil will be on town surveys and he probably through by time you are; however, all matters pertaining to my department you want to look after. O'Neil is directly under orders from Mr. House, but anything that you consider should be done or any change made he will comply with your orders.

What kind of a line have the C.P.R.R. over Promontory Point? I have no doubt that the Commission sent out by the Government, Warren, Blickensderfer and Williams, will decide upon my location through to Humboldt Wells. They certainly cannot decide upon C.P.R.R. location. If Commission desire any information from you give it to them promptly. I have ordered turned over to them the map and profile of the adopted location from mouth of Weber to Humboldt Wells which I filed there. It has all the improvements made on line by you and others and is the 80 ft. grade line over Promontory, and it is the best line in an engineering and commercial point of view that has yet been submitted to me. If you succeed in getting a better over Promontory, I shall be very glad of it, but I doubt if the country is there to obtain it in. You say 90 ft. line with heavy work costs \$200,000 less. Is that after deducting cost of three miles of extra distance, rails, ties, &c."

*Jackie's Letter Box Page 666.*

(1)

1. Gibbons - Gen. A. Had his headquarters at Ft. Sanders (July - 1867) - was his command (all cavalry west, Comma - "Iron Brigade" with Grant.
2. Bent, Col. W.W. Held a command under Gen. D. His orders were to face the tribes south & Old River. L.S. Bent, in 1869, was apparently with the U.P. was in Tel. Concessions with Dodge on C.P. & U.P. matters at Humboldt Wells, L.S., was - not Col. W.W. (Bratter)
3. Thomas, Gen. Gen. - Gen. D. Sumner (1866, and went west "on the road" with Gen. D's David afrah - Dr. Rover.
4. Eddy, J. M. Located telegraph for Gen. Dodge
5. No mention of "the Program" by Gen. D.

*duplicate*

There is a question I would like your views on. At Green River we use 60 ft. grade and great curvature. We have to use a helper over it as trains from Rawlins Springs to Green River haul more cars than they can over that summit. If we had used maximum grade, less curvature and less cost of work would not the same power we now have to use been adequate? The question is, what is true economy on a grade when we have got to put on additional power? The same question arises on rim of basin and the argument against it is that we have virtually gained nothing by our extra cost of line to obtain a 60 ft. grade where we have to have a helper over it. For the trains used on that division, helper would take trains over 80 ft. grade as well as 60. A case like this presented to improfessional minds, especially when interested in having little cost as possible, weighs heavily against the true engineering question. It is one worth studying, and it is well for us to be prepared to as ably treat it as possible."

1869

On January 20th, Mr. L. S. Bent wrote me as follows:

"Jan. 12, end of track three miles east of North Fork of Humboldt, 476 miles east of Sacramento, 33 miles west of Humboldt Wells.

*Salt Lake*

They are laying an average of about two miles per day not more and if anything less. Tracklaying force about 74 to 80 men. They are short of men on account of small pox at end of track. Their usual track-laying force about 120 men as nearly as I could ascertain, but small pox being very bad, I do not think they can add to their present force for some time. They have no ties bedded ahead of track layers. No ties nor iron on hand at end of track. But one train of material received daily at end of track.

Did not go to Argenta but it is reported that they have thirty miles of iron and ties there (87 miles west of end of track) none nearer. Their great drawback in getting supplies forwarded is the want of fuel for engines. They have ordered their teams to go to Cedar Pass (12 miles east of Humboldt Wells) to load with wood for end of track.

I rode over a continuous <sup>up</sup> grade from end of track for twenty-five miles. Grade will be finished to Humboldt Wells by 20th inst. with exception of bridge over Bishop's Creek which will be completed before track gets to it. Bishop's Creek 20 miles from end of track "10th inst. Grading force 2500 to 3000 Chinamen. One contract of 42 miles let east from Humboldt Wells, but no work has been done by contractors of any account and it is generally understood that the contract is ~~an~~ ~~been~~ done. About 400 Chinamen and 50 carts have been at work about three weeks on the big cut near Pequop Summit. No other work has been done on your old works (from Humboldt Wells east 50 miles) until within a few days. The Chinamen are moving up in swarms. They use pick and shovel only. One scraper is worth more than a dozen Chinamen.

The Company expect to finish your work within two or three weeks but do not expect to use quite all the dump you finished. My opinion is that they will find more work within 30 miles east of Humboldt Wells than they have had 75 miles west. Their average fill is less than two feet for 75 miles west of the Wells and the dump is not to exceed eight feet wide on the top. The frost does not hinder much as they blast the earth where they cant use pick and shovel".

1869

On January 23rd, Mr. J. L. Williams wrote me as follows:

*Lafayette, Ind.*

"Have yours of 17th. Dislike to think either Reed or Evans wanting in integrity. The large estimate of solid and loose rock may have been made by some subordinate under Durant's order and interested with him in the sub-contract, so that Reed and Evans may have merely passed it through their hands. They must, however, have known that it was wrong but concluded to say nothing about it. For as engineer to keep on good terms with Durant on this work for 4 years is prima facie evidence against his character. Contractors' engineers the world over are apt to become a little corrupt. I would never act in that capacity, nor would Evans or Blickensderfer or yourself. I am very glad the engineers are sent out to examine C.P.R.R and to settle location. I saw Huntington in Chicago. He seemed to fear it."

1869.

On January 25th, Mr. Morris wrote me that in all probability he would be through with his work by February 1st. He also said he had run a line up Promontory by order of Durant to a summit 75 feet higher than the adopted line with a 100 foot grade per mile and 4° curves; that the location of the C. P. R. R. was on a 90 ft. grade on the East slope, unequated, and with 8° curves.<sup>7</sup> On the West slope they had used much steeper grades than was necessary, as high as 70 and 80 ft. with an undulation of 150 feet. He considered an 80 foot line the best line that could be obtained over Promontory Point, but not the cheapest that could be built.

On January 28th, Mr. Durant left for the East. Mr. Snyder was still in the West with the Commission examining the completed road. General Warren started West to meet Mr. Blickensderfer to make the examination of the Central Pacific. Mr. Hoxie, on writing me on the 28th, said "Mr. C. H. Snow went West this A.M. He is a big thief; would take a spittoon or a palace; tried to smell out the contracts, etc."

On February 1st Mr. Snyder returned with the Commission. They made a favorable report on all sections of the completed road up to the 1000 mile post.

On Febrary 1st, Mr. Hoxie wrote me that "the whole thing at the West end was rotten. There appears not to be much doubt that Durant and Seymour are partners with Davis, Sprague and Co. and Davis and associates. While Durant was here he tried his best to shove Snyder out. Everything possible was done to make him and myself resign."

On February 3rd, Mr. Durant wired me as follows:

New York.

"I propose to have a line on the east slope of Promontory located for the best interest of the company without regard to former surveys. Can you come here next Tuesday?"

I paid no attention to this because we were then in a critical position in Washington in relation to the fight with the Central Pacific about our bonds. I knew that Durant knew this and as he had not taken any hand in the matter was anxious that I should not succeed. I had written to Mr. Oliver Ames in New York, the exact condition of matters and all we had to do was to hold things steady until after the 4th of March when General Grant became President, for I knew all

these things and that the whole outfit would have to get out.

On Feb. 4th I received the following letter from Mr. Hazard:

"Mr. Dillon handed me your letter late this evening. We evidently have enough. I have secured the full co-operation of some parties wanted against us, and are now with Mr. Ames and Mr. Dillon; directing my attention to the best plan of avoiding all questions likely to arise from the crooked policy heretofore adopted which has been full of complications and embarrassments. I have a plan pretty well matured and which I shall confer with Ames and Dillon. Write McComb, Tilden and Allen tomorrow and hope to decide upon all the details this week.

Please advise me at once if I may use your letter on the point of Grant's views as to the necessity of changing our managers, &c. I expect to remain here until the 10th.

I open this today that we have just received a notice from Browning that the President has appointed S. Temple of Tennessee, Government Director in place of George Ashman. If you can get new directors appointed to act on the morning of the 10th, it will very essentially aid us. The notice from Browning does not say that Ashman resigned."

In New York they were fighting Durant indirectly, instead of directly as I was and they kept secret all the inside information they had.

On February 4th, Mr. Snyder wrote me as follows:

"It is news to me but may be old news to you that J. W. Davis (brother to Mrs. F. T.) is the contractor for building the road west of the Oakes Ames contract. We assigned the contract for the "Trustees for the Contractors" whoever they may be all arranged by T.C.D. It may be a repetition of the Gesner contract.

We can earn this year \$10,000,000 and operate the road for 50 per cent, if the road has a fair show. Can't do anything with present construction outfit. Seymour, Reed & Co. at the front. There must be an entirely change at front or road is done for."

No one knew of this contract Durant had with Davis. It was used on the company afterwards in the Durant fight.

On the 5th Mr. Snyder wrote me that Durant is making a handle of my trade with W. C. Wendle; called on me for written statement to explain the vouchers. I gave it. He knew all about the affair before I paid. Said he would not authorize it but made no objections and told me he had been in my position he would ~~not~~ have done precisely as I did.

On Feb. 5th, L. S. Bent wired me that the end of the Central Pacific track, January 28th, was 150 miles West of Humboldt Wells.

On February 6th, Mr. Morris wired me that the Commissioners had left Salt Lake for Sacramento to examine the road of the Central Pacific Company; that company had no maps or profiles ready for their use.

1869  
On Feb. 8th Mr. Morris wrote me as follows:

"The day after my last letter to you left here, Col. Seymour came to Brigham City, and after examining maps, profiles and estimates of the 80 and 100 ft. grade lines west to Promontory with me. He was here parts of three days and after examining the main features of the work here returned to Brigham.

He instructed me to examine and report to him the amount of money which could be saved in first cost of the 80 ft. line by using 10° curves and 116 ft. grades as temporary tracks around the hard work. I was to take the 80 ft. line as a base and break up the grade using pieces of level or light grades and regain the lost elevation by heavier grades, none of which were to exceed those allowed by the charter of the company.

I made such a survey resulting in a saving of \$200,000 but a 10° curve alignment and the maximum grade is 116 ft. per mile unequated. I completed the estimate on this line on Thursday and reported results to Col. S. at Ogden on Friday. Mr. Durant telegraphed Col. S. on that day asking what line could be had by using 116 ft. grade and 10° curves on the ground over which the 100 ft. line is located. I told him (Col. S.) I thought \$40,000 could be saved in first cost and 3800 ft. in distance over the 100 ft. line. He then instructed me to go and see. I began this morning and expect to complete line and estimate by Wednesday night. There can be no doubt so far as the engineering questions are concerned but that the 80 ft. line is by far the best, but the difference in the cost is very great for seven miles of work.

The final line of the C.P. Company is a 90 ft. grade with 8° curves and I can find no signs of equation. The plan of the location is the one Mr. Stevenson advocated and was working on when you were here, except that they have run around the point through which he located a tunnel. This has given them more distance and they cross Blue Creek at the same place the 80 ft. line of this company crosses. The work on their line is well opened and has been pushed wherever the lines of the two companies approach. In two or three places where there are heavy embankments to be built by both companies the C.P. Company is using up the convenient material for their bank. This will materially increase the cost of constructing the line located by you. They have between three and four hundred men on the east slope of Promontory and are doing little or no work at other points. A man just in from end of C.P. track says it is 11 miles east of Humboldt Wells. If this is true they are making good headway, something near a mile and a half per day.

Our track is at Salt Cut near Loose Creek being detained there by slide. Expected to begin laying today; have 8 miles of ties down. and about 27 miles between Piedmont and end of track. Our work from Ogden to Brigham City looks well and is being pushed. One or two swamps are the only pieces likely to be in the way of track and there is plenty of time to get them out. Work on East slope of Promontory should be under way.

Mr. Eddy told me he had written you fully about special commission and its movements. Coll Seymour says he wants me as his principal assistant and has telegraphed Dr. Durant asking if he can have me. I told him I was in your department and would not leave without being transferred or until you did not longer want me, and asked him if he moved in the matter to have me regularly transferred. He said he would have Dr. Durant speak to you about it.

I now have maps showing 80 ft. line referred to in this letter and will put on the 116 ft. line I am now running. I will send you copy to New York."

1869  
On Feb. 9th Mr. Snyder wrote me as follows:

"Yours 5th to Hoxie received this evening; will send to him tomorrow.

I have been sending you scraps with items for a week past as often as I could get spare time. Enclosed is copy dispatch on Snow. Maj. Lawrence, late (and perhaps now) engineer on construction, appears to be mixed up with the outfit. It is all rotten. I won't give Snow a

Omaha.

cent in any contingency or any contract. He is a thief of the first water, and has fallen into the hands of the worst thieves on the road. Six months more such plundering as we now have in the construction department will kill the institution so dead that no set of men can save it from bankruptcy. I want to get out of the concern if the Seymour and Reed outfit is to continue in.

My opinion is that the permanent line between Wahsatch and Castle Rock will not be completed until middle of April. They are having very bad luck there in every form. Tracklaying not resumed yet. We are unloading iron, ties, &c. at Echo. Sending ties to front as fast as they are delivered at Piedmont and some still from Laramie.

Reed has estimated Davis & Co. at least 60,000 more ties than they have delivered. They are making all their combination to steal every cent there is in the concern."

1869

On February 11th, I received the following from Mr. John R.

Duff:

*New York.*

"Yours relating to Burlington & Missouri River railroad stock was received on my return home, and I have seen all the large holders of the stock and they say there is no price for it; that there has not been a sale for a long time. One of them said that he thought it would be a good thing at about forty or under. I think it would do to buy at that, and I telegraphed you today to buy on joint account at that price or less. I will make further inquiries and write you again in a few days.

I learn from Ames that you are having a big fight with Browning and the Central, but I feel confident that you will head them off.

I trust you are looking after the subject of our directors. I mean the Government Directors. What I think we want for the great interest of the road is some first class men of standing and who will give confidence in its management. What we want is that the public should have confidence in the directors, as that will have a good effect on our stock which is a really important matter to us large stockholders and all others that are interested in its security."

Feb. 1869

On Feb. 12th Mr. Durant wired me, "Come on Saturday night; also can you be here tomorrow? Bring map of Promontory Point with you. Answer."

Feb. 1869

On Feb. 12th Mr. L. S. Bent sent me a report of the Central Pacific Railroad as follows?

*Salt Lake City*

"ECKO, Jan. 30th. Work continues same-they average 2 miles a day. Jan. 31st. Heavy snow storm yesterday; snow fell 2 inches here 12 ft. in Sierras, 30 cars iron and other material passed today enroute to end of track.

Feb. 1st. They talk of laying 5 miles a day when they get beyond Humboldt Wells. I think it all talk.

Feb. 2nd. Making strong preparations to lay 5 miles a day after 10th; say they will be at Bear River in 60 days. I doubt it. The following Government Commissioners are here; Frank Dennis, Col. Henley, and Ex. Gov. Bigler.

Feb. 4th. Laid 4 miles today. Gen. Supt. Crocker came to end of track yesterday and stirred up the tracklayers with a sharp stick; told them they must do better or leave the road. I believe they will reach Monument Point in 40 days from date, perhaps a few days sooner. They are sending things here now, 2- cars iron came to front today."

Feb. 1869

On Feb. 12th, Mr. Durant wired me again:

"Are you to be here tomorrow?"

I paid no attention to these dispatches because I had wired Mr. Ames fully the conditions and Mr. Oakes Ames had wired Mr. Oliver Ames that it was impossible for me to leave, but on the 13th Mr. Durant

sent me the following dispatch:

*New York*

"I telegraphed you some time since not to send instructions West without first submitting the same to me. You are away from the work attending to other business and are not sufficiently posted. If you cannot find time to report here, I shall of necessity be obliged to supersede you."

*1869*

On February 13th, J. S. Casement who had contract for laying the track and a good deal of the grading, wrote me as follows:

*Echo City*

"I arrived here from Washington in five days all right. Dr. Durant has started for home but is snowed in at Aspen. The weather here is good. Have laid the track around the first tunnel west of here and will reach Ogden by the 5th of March if we can get ties fast enough.

Reed is out on the road looking after things generally, so that Seymour may not have to rupture himself by over exertion. That is all I know about the road at large."

*1869.*

Mr. Snyder wrote me on *Feb. 13th* as follows:

*Omaha*

"At rates allowed by N.Y. office, (1 1-10 per ton per mile for freight) the contractors business cost me in 1868, \$1,410,473.34 more than I was allowed to charge them. This, of course, is not fair. Including contractor's business at rates allowed, I cannot, of course, make a decent showing; but charging that at actual cost and no more, I show operating expenses about 41 per ct. Have done very large amount of free business during the year for company, which will be wiped out as soon as road is completed. Think showing is good."

On *Feb. 16th* Mr. Bent wired me that the end of the Central Pacific track was eight miles West of Humboldt Wells, laying over two miles per day.

On February 16th, Mr. Morris wrote me as follows:

*Brigham City*

"Enclosed find letter from C. P. Laughridge the young man whom you wished me to hunt up.

When I last wrote you, I had examined the ground over which the 80 ft. line is located with reference to alterations for temporary tracks. I was then directed to examine and report on a line with 10° curve and 116 ft. grade. I continued the line which I had run for temporary track under your direction to the flats and connected it with the 80 ft. line. Result was saving of \$100,000 in cost and 3500 feet in distance over the 100 ft. grade line as reported to you.

I inquired where the special commission was and found they were in San Francisco, and that Col. Williams could not leave there on account of business for a week or ten days. I have all notes in my hands of the Promontory surveys. Mr. Reed has nothing but the notes of the located 80 ft. line.

Mr. Reed has received two telegrams from Dr. Durant about line over Promontory. One directing him to put forces to work on the line described and recommended by Col. Seymour which is the 80 ft. line with alterations (116 ft. grades and 10° curves) the other that the grading must be ready for the track in 40 days.

I have received no orders from Dr. Durant to turn over notes to anyone. Neither Mr. Reed nor Col. Seymour are willing to direct me to turn over notes, and so I hold them for further orders as directed by Dr. Durant.

W. F. Hurd and Mr. Maxwell both being away from their line, I went over the line from Brigham City to the Salt Flats, near Monument Point, with Mr. Reed and returned today. The work from station 3550 to Monument Point is almost completed. A good force is at work from 3550 to 2400 and Maj. Bent sent his forces which had been working

west of 3500 to the East Slope of Promontory today. He will have about 300 men and 100 teams at work on the east slope. In addition to these forces most of McGee's force who have been discharged in Weber Canon are working west and will be picked up by Bent.

Good progress has been made from Ogden west and I think there is nothing in the way of track until the Salt Flats are reached between Little Mountain and Promontory. I rode over there with Mr. Reed on Sunday & found about 1-4 mile which was under a foot of water, and a mile and a

half which is very soft and away from any high ground where material might be borrowed. Although it is the very worst season of the year for work upon these flats; yet that work can be done and done in time to prevent the track from being delayed if it is taken hold of now and pushed by men who will not talk all the time against the possibility of doing the work. Mr. Reed says there is no question in his mind but that the material will stand and will make a good road-bed.

The Central Pacific Company have about 600 men between Ogden and Monument Point; are doing good work on Promontory and have opened all the rock cuts. More men are going daily to them. Since Commission went west their force has been multiplied by them. They have some Salt Flats both east and west of Promontory yet to do.

I have just received the following from S. B. Reed: "The following telegram just received. 'Let Morris take charge of construction on eastern slope of Promontory' Signed, S. B. Reed. I will start work and go to meet commissioners. I wrote Col. Seymour telling him I did not think the 80 ft. modified line could be completed in 40 days by any force the company could put on the work; also that the 80 ft. line as far west as Station 2898 could be done in that time. That the 116 ft. temporary line could be used from 2998 to 3256- that it could be finished in time and that the cost would be for grading about \$59,000 and length of temporary about 5 1-2 miles; and that the work done on the temporary tracks around heavy work on 80 ft. line and which would be thrown away when line was completed would amount to fully \$50,000."

1869  
On Feb. 17th Mr. J. W. Davis wired Mr. T. C. Durant from Echo

in relation to Snow as follows:

"I mean this: The report to Andrew Johnson will be damaging to your interests. He has been closeted with Lawrence and fully advised. Contract through me or any one else for his benefit entirely changes matters. You must use your own judgment if it is necessary. If you are independent of reports, I will do nothing otherwise. Instruct some one with power to arrange for you. Answer yes or no."

On February 18th Mr. James A. Evans wrote me from Laramie that they were snowed in and had been for two weeks and there was not much prospect of their getting away for several days.

On Feb. 18th Mr. Snyder wrote me that our Government Director, Snow, came in last night full of whiskey and surrounded by an additional lot of dead beats. He is at the Cozzens House this A.M. talking loud about the wretched road, &c. I have not gone to see him because I will not have anything to do with such a crowd. The weather is warm here but storming terribly west of Cheyenne. Road blockaded for nearly a week past."

On February 13th, the Central Pacific track was 15 miles West of Humboldt Wells.

1869

On Feb. 21st, Mr. Snyder wired that advices from Cheyenne to Rawlins this morning very discouraging. Snowing and blowing fearfully. Several hundred men and 10 large snow-plows at work, but cuts fill up as fast as they can shovel them out. Road open to Cheyenne and trains nearly on time.

On the 21st, I received the following letter from Mr. Blickens-  
derfer, giving me his progress in the examination of the Central Pacific road:

Sacramento

"We examined the road about half way up the western slope of the Sierra and returned to this place to spend Sunday. Tomorrow morning we leave again for the eastward; Col. Williamson having arrived here yesterday evening, completes the commission, except Mr. Clement whom we shall meet somewhere on the line.

The more I think of it the more I incline to the opinion that after viewing the roads here this commission should pass over the Baltimore & Ohio Railway. What do you think of that? The fact is, neither Warren or Williamson have much personal knowledge of railroad work and although not yet fully prepared to express an opinion, I think the magnitude of the work over the Sierra has been much exaggerated. Much is said of the immense amount of tunnel work &c. It is true they have fifteen tunnels but their aggregate length is only 6660 ft. Now the first road I ever built (in 1850-3) had over 5400 ft. tunnelling on it, in five tunnels three of which were each only a few hundred feet shorter than their longest which alone exceeds each of the three; and the last road I was engaged on before I came west, the Pittsburg & Shenbruville, has over 5500 ft. of tunnelling on it in less than forty miles, one of which is over 2200 ft. long and has no approach at one end over a mile long in rock cutting running gradually from 0 to over 60 ft. cutting. I apprehend the single tunnel in the Blue Ridge between Charlotte and Stanton in Virginia will or has cost as much as all the tunnels on the C.P.R.R. put together.

It is no easy thing for inexperienced men like Williamson and Warren to realize these facts without seeing such work, and while the Californians have done good work, they really think they have unheard of things, wonders never before attempted which is all a mistake.

Please think of this after and write me to Omaha. I am not disappointed in my views of the C.P.R.R. in general although of course I could have had but a meagre idea of things before I came here and I know you will appreciate my reasons if I say I do not like to write much on that subject at this time."

On the 23rd, Mr. Snyder wired that the blockade West of Cheyenne lasted ten days and the storm continues severe. This storm prevented the furnishing of material to the front.

Casement wired that his men were all worked out and frozen; impossible to get work done. All the passenger trains were being sent out fully provisioned with cooking arrangements aboard.

On the 24th, Bent telegraphed that the Pacific track is on the 7th mile East of Humboldt Wells. No trains from Sacramento for five days. Snow everywhere. 21 cars ties from Piedmont today. The distance by our line from Omaha to the mouth of the Weber, is 1026 miles; mouth

of the Weber to Humboldt Wells, 232 miles; Humboldt Wells to Sacramento, 509 miles, total 1767 miles.

On Feb. 25th, Mr. Durant wired to Snyder to send 800 flats cars to Chicago. If you can't send the cars, send your resignation on and let some one operate the road who can."

On the same date Mr. Snyder wired me from Omaha:

"T. C. Durant appears determined to get me out of the way as he and his tools find that I am not to be bought, sold or scared by them. My services are at the disposal of the road whenever they desire them. I don't propose to get out of the way of anyone else."

I had written Snyder confidentially the conditions and what he might expect after March 4th, and not to pay any attention to any of Durant's order, so far as reflecting upon him, but to get along the best he could until that time.

On the 25th, Mr. Hoxie wrote me from Wahsatch as follows:

"I have been at this end for past three weeks looking around. Have picked up some information but little that can be sworn to. John T. Kingsury, an engineer, civil, told me today that he knew the transaction that Silas S. got \$5000 in a certificate of deposit before contract was let. It was a matter of ties. He says he knows what Durant is in but would not tell. Says S. B. Reed and Goslins are partners in several things. I believe he could be persuaded to tell all about the entire transaction. Says that M. T. Lyman is now hiring teams for the company at \$40 per M.B.M. for hauling lumber to tie siding 4 miles east Bear River near Aspen. They divide with Seymour. Other teams not in the ring are getting \$22 and \$25 per M.B.M. These fellows say that T.C.D. gets 10 per ct. of all contracts, but you can't tell what is true. All I know is that the entire outfit is rotten to the core."

Were it not for you and Mr. Snyder whom I know to be my friends, I would leave and go to Iowa, for no man can stay here and be above suspicion.

The track from 1000 mile post to 1020 is about the same as that from Aspen to Evanston, only that we have 14 degree curves on bridges and 22 on grade to run. It is about impossible to work it now and what it will be next spring no man can tell. I dont think there will be 2 miles of consecutive track when the snow goes off that an engine can be run over. Around tunnel No. 3 we have no track, beyond near State Point and Morgan City, it is still worse. They are now taking men and teams off of the permanent line at head of Echo and sending them to Promontory.

The C.P. track was 18 miles east of Humboldt Wells on the 17th and they have material for about 100 miles except the ties and fuel for engines. They are getting that as fast as they can. One and a half miles per day is their extent I think. I have sent to Salt Lake about the injunction matter; dont think Brigham Young will dare to play false, but he may.

No telling when we can dig out of the snow on Laramie division, about 600 men at work and no progress made. Snow 10 ft. deep and all the valley full. Will write you again if blockade raises." *The surveyor Kippel speaks of was track around bridges and tunnels being built.* On the 26th Mr. Snyder wrote me from Omaha as follows:

"I am trying to get W. M. Blair to go to Washington to see you and post you in person as to matters in the construction department.

Blair for past year has had charge of supplies for Evans and forwarded supplies for Reed. He was to have gone to the road with full powers when Evans' division was finished, but the Seymour, Reed and David influence secured his discharge and the retention of the men who have been the tools of the thieves.

Blair, in my opinion, has performed his duty well and is thoroughly honest. He can explain how Reed has run short of supplies so that the thieves around him could speculate off contractors and road, and the manner in which Davis & Co. get their supplies without check or limit. Reed is a partner of Gosline, the man who issues his supplies.

G. has a store in the Company's warehouse at Echo and always has what the company lacks. Reed has telegraphed Blair to send him no more flour so as to give his parties a chance to speculate on their stock. Silas Seymour, Mark Seymour, Tom Bates and others are in the ring.

Blair is in Chicago. I send there to secure him his late chief's cleark, Harrow Morrow, who is also posted. I have faith in the integrity of both for they would not have been ousted had they been thieves. Morrow has more nerve than Blair and by remaining with him can get him to tell the whole truth. Blair is not aware that I have anything to do with his trip to Washington. Please pay them nothing as I will attend to that. If he needs say \$100 for return trip let him have it and I will refund."

Feb. 26th I also received a letter from Mr. Hazard as follows:

*Peace Dale, P. J.*

"I have just written to Oliver Ames about U.P. matters. I think it may be important to have the Government directors nominated as soon after the 4th as possible that they may meet preparatory to the annual meeting of stockholders. The conduct of Johnson in giving commissions to men who openly demanded large bribes as a condition for not making false reports is outrageous and should not be endured a moment longer than necessary. I saw a very mean fellow at the office this week, whom, it was told demanded \$25,000. He had spent much money for A.J. and I suppose had not time to make approaches to the objective point and made a direct assault in hopes to carry it before his base of operations was cut off.

I think the public are well pleased with Grant's independent course and would be glad if he would cut off all that patronage which M. C. have usually assumed and which they have so generally used for corrupt and selfish purposes. I have great faith that he will get honest, capable men about him.

If I had had time I should have made a suggestion to him about our Indian troubles, which, however, you and he would think at best a very strange one, but I believe will bear examination. It is to put the whole matter into the hands of the Society of Friends, who through their yearly meetings in N. E. Pa. Baltimore, Ohio, Indiana and Iowa, would find men who would undertake it as a duty and who at half the expense now incurred would preserve peace and advance the Indians in civilization and the arts. Under the management of peace there was no violence from the Indians in Pennsylvania for 70 years, and there are still many in that society and they are ready organized for such work. Otheſſ will tell you what I have written. Grant's order about the losses is a straw very indicative of his way of thinking of things."

On the 27th, Mr. D. T. Casement, one of our track-layers, wrote to Mr. Snyder as follows:

*Laramie.*

"Arrived here from front today. Have seen how the snow works and it is my opinion you cant run trains over this division only by sending a snow outfit ahead with boarding cars and provisions, and as soon as you get through a cut have train follow. Have seen a cut fill up in two hours which took 100 men 10 hours to shovel out. Train west is well organized, but cant more than keep engines alive when it blows. I dont see how you can improve things here except to get water at points where it has failed."

1869

On March 1st, the track had reached Devil's Gate Bridge at the head of the canon at the mouth of the Weber, 1026 miles west of Omaha. The Central Pacific was now 40 miles East of Humboldt Wells.

On ~~March~~ 1st General Grant sent for me and showed me the following dispatch which he had received:

"I have in my possession positive evidence of a great swindle in regard to estimates of work done in Weber Canon on the U.P.R.R. The wrong should be investigated for I do not think the Government or the R. R. company should be cheated out of \$100,000 or perhaps more.

As an introduction I refer you to Gov. Chas. Durkee, Secy. Reed and the Hon. Demas Barnes, New York City."

I informed him that we were thoroughly posted on these matters but it was impossible for me to do anything; that Durant had control and all these men were in his interests and the only possible way of stopping it was to remove Durant, which I was in hopes would be done at the next meeting. I saw from General Grant's conversation that as soon as he got in power, he was determined to have a complete re-organization of the road East so far as the Government was concerned.

On March 2nd, Mr. Durant wired me as follows:

"Joint resolution as published legalizes requirements of special Commissioners; if legalized it will cost us millions."

On March 3rd, I received the following letter from Mr. R. H. Hazard:

"Dillon and myself have been conferring about the Government Directors. We both think it would embarrass us very much to have even a single one in whose fidelity and aid in any important vote we could not rely; one diseased spot weakens the whole system. We want now to have men who can act together with perfect harmony and confidence, and who had the confidence of the Government and of the public generally.

I was in Boston Monday; all things working very well there. I arrived here this A.M. and have not yet learned the ground fully. Shall remain here a week if I can be of any use in reforming things. We are all suffering in reputation and everybody seems to deem us fair subjects for plunder.

If you will telegraph to Mr. Dillon the names of Government Directors, he will understand it. Direct to me at his house, 7 35th St. Can you get them appointed so as to meet with the present Board on the morning of the 10th before the election by the C.? This is a very important point. Please let Dillon know about it as soon as practicable."

The talk about Government directors came from the fact that I had had an understanding with President Grant in relation to them that they should be men of the strictest integrity and who could, under no circumstances, be used, and had submitted some names to him. He also had some men in view whom he would like to give the position to and I had written to our people giving some of their names.

On March 3rd, 1868, I also received the following letter from Mr. J. M. Eddy, who was working in the west looking out for the town sites for me:

Salt Lake City.

"I returned last night from Brigham City and the Bear River Crossing. At the latter place I found quite a number of squatters, a small town staked off and claimed, and a large number of business firms represented, and all anxious to invest and locate somewhere. All the land on even sections has been claimed and a clique using all their influence to have the main town of the valley located there.

I found an "Independent town company" had been organized, so as to prevent another Green River trouble I laid out a town on the west side of the river on Sec. 31 (as near as we could make it out) which will at least prevent the selling of lots by them, and in case the R. R. company want to make a town there it will be ready to throw into market at any time, and I think I could sell a large number of lots there now.

I am, of course, anxiously waiting for the decision as to site, but as the end of track reaches past mouth of Weber Canon today, am in hopes to learn something definite soon. Was told that Mr. Reed ordered a side-track put in just east of Taylor's Mill; also one on the east side of Bear River but as to the latter place advantage can only be taken of the river water by locating on the west side, and the lay of the ground is such that the north, east and south side of the town touches the river, besides the west side is higher and less liable to overflow. The ground is about 16 feet above the Lake, grade good and a long tangent from the river west.

I didn't take the C.P.R.R. grade into consideration in locating the town, and their line runs through parallel to the U.P. and north of it. The Central people all think or at least say that Bear River Crossing is the most eligible site in the valley. The telegraph Dept. at this end seems very corrupt, and the surest and most speedy way of giving any important order to the public is found by sending it through telegraph office. Parties here knew of Mr. House's order for me to delay the sales &c. before I ever received it."

The Bear River crossing he speaks of is the crossing of the Bear River west of Ogden. I had written Mr. J. L. Williams, the Government Director to be sure and be at the meeting in New York and on March 4th, he sent me the following dispatch saying he would reach New York City Sunday night and perform duties required

Mr. John B. Ally, who was largely interested in the Union Pacific and one of the Directors, had been in Washington in conference with me and knew my determination to have a thorough reorganization of the road, both government and other directors, and to eliminate the Durant interest entirely. He wrote me from Boston on March 4th, 1869 as follows:

"I have been at work busily since I left Washington, and feel greatly encouraged in all quarters. I made good use of your determination and will, and told Oliver Ames and Duff what to expect if they failed to do their duty. Ames promises to be stiff. I feel now that they will if we are determined. The concern under its present management fairly stinks everywhere. Give us Government Directors who will be honest, straightforward men and all will be satisfactory. What a treat it will be to

sit in the Board with a good set of honest men. You spoke of Price and Morris. I doubt if they could be bettered. Brooks, for a Democrat, would be well. I suppose Williams you will go for. He is an honest man, and for that reason I should not object although he has used us cruelly--on account of his anger and contempt for D. and McComb. I told Oliver Ames you must be put in to the Board. He thinks so also.

I was greatly gratified with Grant's appointment of Delano. I have said I knew of but two men in the country exactly fitted in every respect for that position--those were Boutwell and Delano. Grant's election cost me considerable money and I want and expect nothing but good Government; and if all his appointments are equal to this one we shall surely have it, and I shall only be too glad of what I did in aid of this excellent chief Magistrate."

For Secretary of Interior, General Grant had decided on J. D. Cox of Ohio, who was a great friend of the Union Pacific. Then he also placed in his cabinet as Secretary of State, Hon. James F. Wilson of Iowa, who was also posted in relation to everything regarding the Union Pacific, as he lived with me during the 46th Congress.

From the fact that General Grant and General Sherman had such a thorough knowledge of the Union Pacific, I felt perfectly satisfied that after the 4th of March we would be able to harmonize our difficulties with the Central Pacific and have a board of Directors who would stand up for the property against all comers.

*more*  
As soon as General Grant was inaugurated, on the evening of March 4th, he sent an order to the Treasury Department suspending any action in relation to the issue of bonds to the Central or Union Pacific roads and also to the Interior Department suspending any action upon matters pending there. This halted the great fear we had that the Central Pacific would succeed in getting an issue of bonds on their 100 miles of line which covered our territory from Ogden to Echo and was a great disappointment to the Central Pacific who thought they had the arrangements all made so that they would hold that club over us in the final settlement of the two lines which were building parallel to each other. I had kept Gen. Grant so thoroughly posted on every movement that he had seen the great injustice to the Union Pacific himself. I could not communicate anything to our people because there was a leakage in New York, everything I said or did being taken to Durant. Our people were greatly surprised and pleased when they received this order.

There was a great friction in New York; the inability to obtain money and the fact that Snyder was behind hand with the payment of his men made matters out west very blue and uncertain. There were all kinds of rumors among the men.

1869

On March 5th I received the following letter from Mr. Snyder:

Omaha, March 5, 1869.

"Yours 27th ult. received this morning.

Our snow difficulties with past three weeks have about used me up. Dare not leave here on account of financial situation. Am satisfied that men have done all that could be done, and forces are properly organized under good foremen. Have sent from here all men that it has been possible to employ. I send Mr. Ames copies of dispatches received daily giving situation and location of forces. Dispatches sent to New York for papers have been engineered by parties connected with Central Pacific, and signed in addition by parties who know nothing about snow storm in this country.

Dan Casement came over the road last week and knows what we have had to contend with; said he would probably be in New York next week. and explain to Mr. Ames. A personal explanation from party not interested may be more satisfactory than my letters.

Hoxie is in the snow region this morning. He will do all that man can do to open the road.

Snow gets his case on coal, wood and wind mills from J. W. Davis. The difficulty with Davis is that he cant steal in my department. If the officers of the road think I am a thief I want to get out. I will say one more to you and not for the Directors that I have never made one cent directly or indirectly from any department of the road; have never been interested in any contract; have never received any present or given any contracts to any relatives or personal friends. I dont care a cent what Davis says or Snow thinks, but I do want you to be assured that I have worked honestly and faithfully for this company, and the closest investigation that can be made will demonstrate it.

I hope for the best in New York next week. If power of Seymour, Reed, Davis & Co. is to continue I propose to quit at once. I hope you have seen Blair and Morrow as they can give you facts and figures.

Road open yet from Piedmont to end track and ties forwarded as fast as delivered. Iron at "who for several miles more track.

Campbell on Laramie Division has sent his resignation to take effect at once. Hoxie will take charge there for the present. Dave Remick was here last week and said he would take it if he could get away from Wells Fargo & Co. honorably. Would like to get him as I consider him one of the best R. R. men in the west.

I wish you would telegraph me from New York on Wednesday next in regard to election, &c., as I wish to know soon as possible what to expect."

On March 5th, I also received the following letter from Mr. John Duff, giving the condition of the election of Directors under the Ames contract:

New York, March 5th, 1869.

"I saw your letter referring to Gen. Rawlins, and I think that your wishes in the matter can be accomplished after we get through the election that is to come off the 10th. The question of the election is an important one and whether it is an open one depends on fact of Ames contract being ended or not. If the Ames contract is not completed, the matter of electing Directors is tied up by that contract. Under the terms of agreement that Oakes Ames made with Durant and his friends the present Board of Directors or those of them who are elected by the stockholders can nominate the next Board, and the Trustees of the Ames contract cast the vote.

You I suppose know the way in which our stock is tied up and the stockholders are in the hands of a bare majority of the present Board of Directors. That contract was made by Oakes Ames without consulting me or in fact any of the Boston parties, perhaps with the exception of John B. Alley and in its execution was committed to parties who had not taken any interest in the work. The parties who had devoted their time to the interest of the road at the request of Mr. Ames were entirely

ignored and even Mr. Williams, who was assaulted by Durant in performing what Mr. Ames requested, were entirely left out, and others who had never taken the least interest in the work or loaned the company their money and credit were put into places that they were entirely incompetent to fill. And if the present Board of Directors or a majority of them are in the interest of others than the Boston parties, and if a majority of all the Committee are in the same interest and control the U.P.R.R., it is the work of Mr. Oakes Ames.

I for one do not believe the Ames contract to be finished and that I am bound by that assignment as I have taken the dividends under it, and as far as I am concerned I do not intend to go into a fight and then be left out as I and my friends were before. I shall let them make their own fight and take such course as I deem for the best interest of the road.

The Fisk case is decided against the Company. Judge Barnard refusing to remove it to the United States Court. I do not wish to remain in the Board and I am perfectly independent of all the cliques that are trying to get control. I think if we go into a fight we shall come out as we did before. It will make no difference whether I am in the fight or not as they can do as they please if they have a majority of the stock, as they claim they have.

Hoping that all will come out right and that there may be nothing done that will injure our great interest in the road, &c."

On March 8, 1869, Mr. Hazard and Dillon wired me:

"Important. New directors act morning of 10th. Expecting you here."

On March 8, 1869, Mr. L. S. Bent wired me that the Central Pacific track was 27 miles East of Humboldt Wells, laying two and one-half to three miles per day. Weather clear and pleasant. They are bringing all reserve forces to the front and putting them out along the line.

On March 9, 1869, when Durant saw what was coming, he raised the question of one of my estimates on the work West of <sup>910th mile Post</sup>, stating that I had no authority to make any estimate; that he had made a contract with J. W. Davis. This opened up the Davis contract fight. Mr. Ames wired me in relation to my authority for making the estimate, on March 9th as follows:

Washington, 1869.

"In answer to the inquiry upon what basis the estimate of Dec. 31, 1868 was made, I have to say that the estimate to the contractors of Dec. 31, 1868, west of the 910th mile post was based on the extension of the Oakes Ames contract, a copy of the assignment of which the company furnished me and instructed me to estimate on the prices fixed in that assignment."

On March 10, 1869, Mr. Eddy wired me that the special commission to examine the Central Pacific Railroad arrived at Ogden that day; they had examined the road from Sacramento to that place. Will remain in Salt Lake City until report of examination between the two ends of the track is made.

General Grant had given orders to Mr. Hiram Price, who was a Government Director that at the Union Pacific meeting on March 10th, for the Board of Directors, Mr. T. C. Durant must be eliminated and named his Government directors, Messrs, Price, Williams and Brooks. Brooks was a member of Congress from New York. Price had been a member of Congress from Iowa and Jesse L. Williams was the old director. When the Board of Directors met they saw the handwriting on the wall. Durant friends tried to stem the current against them but finally saw it was useless and retired, making the best of it and from this time on, the Union Pacific was under new direction and new management and the Durant interest eliminated, excepting so far as the great interest he had in the contracts and as a stockholder of the contracting party. We expected him to make as much trouble there as possible. I was congratulated in almost every direction for the success in this fight and it was a great relief to the Ames'.

On March 13th, I received a dispatch from Snyder that the Central Pacific was thirty-five miles East of Humboldt Wells.

As soon as matters were settled in New York, on my return to Washington, I immediately got into communication with Mr. Huntington in order to come to some agreement as to where the tracks should meet and to stop some of our expenses where we were building parallel to each other.

On March 14th, 1869, I received the following letter from Mr. Dillon:

Warsaw, Ills, March, 14, 1869.

"We have had a lively time of it since you left, but have beaten the enemy so far, and have barricaded the old lion in his den, and if we all stand firm he will have to remain there. He seems very tame at this time, yet he may be preparing for another leap, so we must be careful to watch him close.

I spoke to Duff about an attorney at Salt Lake. He said you had better select him. I think so too. You can send Popperton to look after the matter if you think best, but dont fail to have it attended to. I did not show Durant your telegram, but I asked him if we had an attorney to act for us. He said there was no danger but that you were looking after it.

As for your Washington matters, I want you to have everything right there. I depend on you to look after details; dont fail to have our election made valid. I dont think it will be necessary for me to go to Washington; if it is will come on if you let me know. I think Ames has all the proxies and you can organize, but be careful to make it straight.

We should go West as soon as possible, if things are all right. If we do we want full power on the contractor's work as well as the Company's, so that we can make what changes we think best. Say to Mr. Price that I depend on him to go with us. I want you to keep our forces

all right. Duff is all right. I shall insist that you shall have power to act when the committee is sent out there so that some of those old robbers will shake in their boots. Let me hear from you."

The fight between the Central Pacific and Union Pacific had not gotten before Congress and I was using every endeavor to bring for their information, all the information possible to ~~post~~ them. The Central Pacific were there in great force, led by Mr. Huntington, pressing their cases and their claims.

On March 16th, 1869, Mr. J. M. Eddy wrote me as follows in relation to the town in Salt Lake Valley:

Salt Lake City, March 16, 1869.

"I have been telegraphing quite extensively of late, trying to ascertain whether the company intended to locate shops, &c. at the new town just north of Ogden. As it is I have advertised that lots would be offered for sale at auction on 22d inst. Bear River crossing has taken a great many away that were waiting for this town to be put into market; have gone there and squatted "ala" Green River and trouble may be anticipated. Gen. Williamson is there and I think anxious to have that town (called by him "Corinne") also thrown into market.

I was up to Bear River expecting to remain there and look after matters, but the Special Commission arriving and after a talk with Mr. Blickensderfer, I anticipated orders, and offered my services until I was otherwise ordered. I telegraphed you from Brigham what they intended to do, but the next morning they changed their programme, which you doubtless understood by my asking for cars for them, &c. and I brought Gen. Warren and Col. Williamson's Assistant (Lt. Hener) to this city.

The Central folks seem very attentive and there being no one to look after their comfort and conveyance from Ogden to this city on account the Union Pacific Company, I took the responsibility of acting. Have provided rooms for all having received telegrams that the balance of Commission would arrive from Ogden tonight and will remain with them until the 20th, then go to the new town and take charge of the sales. There has been no name given for it and when the time came for advertisement, &c. I named it Bonneville in honor of Col. Bonneville whom history says came to this country in 1827 and made the first map that was ever made of the Great Basin, etc.

Track now reaches past the site, but nothing is being done towards putting in sides, and Mr. Reed can tell me nothing about where depot will be established, and if I can ascertain nothing will have to start at it hap-hazard.

Mr. Ames telegraphed that he would start for this city yesterday, but the road is again blocked so there is nothing certain about his arrival.

The officers at Camp Douglas are anxious to get some lots on time. I told Col. Lewis that I wrote you some time ago and until I heard from you direct on the subject would hold some lots in reserve for them in anticipation of orders. I will reserve the 50 lots you wrote me about and send you map and the numbers soon as the centre of town is determined.

I enclose a pass handed to me by Maj. Egan. He requested me to ask to have it renewed." "

The Central Pacific people were proposing suits, injunctions, etc. to Congress against us and I wired Mr. Snyder on March 16th to send our Attorney, Mr. A. J. Poppleton to Salt Lake immediately to look after those suites.

Mr. L. M. Clements at the instance of the Central Pacific had been added to the ~~Blickensderfer~~ commission.

<sup>1869</sup>  
On March 19th, Mr. ~~Blickensderfer~~ wired me from Salt Lake that the work at the head of Echo ~~would~~ be done in thirty days and that they were instructed to complete the examination and proceed to Washington to make their reports. In answer to my dispatch Mr. ~~Blickensderfer~~ on the Central Pacific Railroad, he wired from Salt Lake City on March 20th:

"I know of no locations by Central Pacific East of Monument Point prior to 20th of October except what you saw on Promontory. None made east of Weber canon except Ives' 1867."

Our people in New York had become thoroughly aroused from the efforts of the Central Pacific before Congress and Durant with all his forces in the West had been set to work by them to prevent my getting all the information I required for making affidavits, etc. and I was receiving telegrams from Snyder daily, who was active with our Attorney there in getting up the affidavits.

Mr. Oliver Ames had authorized me to discharge all of the Durant force west including Seymour, but as I needed the testimony of a good many of them and as the tracks were so close, I thought it better in policy not to let them go until we let the forces in general go, as I thought it would be better to work in harmony with them than to defeat the Central Pacific.

On March 27, 1869, Mr. Dillon received the following letter from me:

Washington D. C.

"The work at head of Echo and at lower tunnel should be pushed and main track over both be gotten down immediately. Am told workmen are being moved from that work west. Unless we get that track down on main line soon we will have trouble. Hoxie says the track west of 1000th mile post is so bad that as soon as it thaws, it will be almost impossible to run over it. The Central Pacific is now within 100 miles of Monument Point and laying 4 to 5 miles a day, so they telegraph me. From what I can learn the Commission will be very severe on the road built this winter, they will bring in more money to complete it than we can possibly get bonds for, what road we shall build. From the report of the commission and from what Hoxie and Snyder says, it must be in an awful condition. We cannot stand it much longer, it is very doubtful how we come out here, the committee stand four for us to five against.

On March 26th, 1869, I wrote to Mr. Seymour as follows:

Washington, 1869.

"In addition to last telegrams affidavits want to show amount and cost of Central work done up to Jan. 19, east of Monument Point or from 660th to 740th mile posts; also date of location of the line over same ground; also cost of C.P. work from 560th to 660th mile posts up to Jan. 19; who occupied ground first and when. East of 660th mile post; if we did, want affidavits on that point; also whether they have graded on a different line from their preliminary line of 1867. Our success in ever obtaining our bonds west of 1000th mile post depends upon prompt action in this matter. Get Maxwell, Morris, Reed and others."

"Telegraph when U.P.R.R. opened work between mouth of Weber and Monument Point and when C.P.R.R. did. My approximate estimates show the grading on 100 miles west of Monument Point to cost about \$8,000 per mile and the 80 miles east to Ogden to cost a out \$15,000 per mile. Have affidavits conform as nearly as practicable to this."

"Telegraph me daily when track is laid of progress, giving distance west of Ogden and East of Monument Point and when C.P.R.R. is, if you know."

On March 26, 1869, Mr. Seymour wired me from Promontory Point that the Central Pacific track was 100 miles East of Promontory Point on that date.

On March 27th, 1869, I received the following letter from Mr. Blickensderfer:

Bitter Creek, 1869.

"We arrived here this evening, and as Mr. Clements insists that he will require not less than ten days more to complete his examinations of the U.P.R.R., Warren has decided to take the first eastwardbound passenger train and go on, spend a day or two in New York and then proceed to Washington without waiting for the rest. I incline to remain with Commission until we reach Cheyenne at least, unless I can get an engine to take me over the road between here and Cheyenne by daylight (the passenger trains run over this part by night) in which event I am somewhat inclined to do that, and then go on at once to Washington. I am out of patience with the constant delays, and yet I am disposed to see what is done by the others.

I wish to ask you whether you are aware that the foundations for the permanent masonry on Black Fork are being prepared on bends outside of the line as located and built, and not on the line as now constructed. The plan is to break up the present long tangents thus putting in the permanent bridges in the bend in some places 200 feet from the present line right in the long tangents. At Green River also the foundations are being prepared on the present temporary line and not on the main line. I consider the whole of this as a piece of infernal nonsense, and the U.P. Company may as well understand that the Government commissioners will so report it, and make up their minds accordingly. I have no idea that you know anything about it and therefore write.

There are other strong indications that work represented to be temporary last fall is designed to be retained as permanent of which I presume you are equally ignorant. So also the masonry on Bitter Creek is of a character that will not stand inspection, and I think if the U.P. Company takes such work off the contractor's hand it not only does itself injustice but will find the Government will not be satisfied with any such work. There are strong indications of things in that work which will recoil with bad effect on the company.

You may consider this as none of my business, but I assure you I write with the best interests of your company in view, as well as in the conviction that you and President Ames are ignorant of what is going

on, and that the Government commissioners will notice these things, and I believe they should be promptly disavowed both for your sake and the Company's.

I could have wished some authorized agent of the U.P. Company like yourself could have accompanied this commission over your road. The want of it is felt, and I cannot supply the omission in my own person. Our progress is delayed and our labors will be increased thereby, besides the effect is I think permanent, especially as Col. Williamson is one of those who especially feels what of accommodations. The fact is, he is more of an old granny and knows less than Gen. Barnes though I believe him an honest man and fair as far as he knows, which makes amends for very much."

The celebrated Fisk suit against the Union Pacific was nearly all in New York and our people there were fighting that.

On March 29, 1869, Mr. Snyder wrote me as follows in relation to it:

Omaha, March, 29, 1869.

"From looking over the affidavits in the Fisk suit, my impression is that he gets most of his information in our N.Y. office. It is a question with many people here which side of the case T.C.D. is on. His policy undoubtedly will be to rule or ruin.

*Note*  
"We are in awful shape here financially and it is hard work to keep down excitement. Banks and business men of Omaha must have help soon or a crash will certainly come. I am almost discouraged but will try to hold matters together until you come out. If you get the power you spoke of I am willing to remain and assist to the best of my ability. If not, I wish to get out very soon. Am growing old too fast and no salary that could be paid me would make it an object to remain here another three years and experience the same trials."

The issuing of bonds on the last end of the Johnson administration was so palpably illegal that on March 29th, Mr. Bingham in the House of Representatives offered the following resolution:

*W.H.*  
"Whereas, on the 2d of March, 1869, only a few hours before the dissolution of the late Administration, by direction of President Johnson, United States bonds to the amount of \$2,400,000 were prepared for issue, and \$1,400,000 of such bonds actually issued to the Central Pacific railroad of California on account of the alleged construction of certain sections of their railroad:

And whereas it is alleged in certain proofs on file in the Treasury Department that said bonds were issued over a line of route hastily, wrongfully, and illegally approved by the late Secretary of the Interior, at a time when commissioners were, by his own direction, investigating to ascertain the best and most advantageous line for the public interest, and also that the certificate of the commissioners that work had been performed to the value of \$20,000 per mile over the line upon which the bonds were ordered to be issued is false and fraudulent, and that the whole work performed over such line does not exceed the value of \$10,000 per mile;

And whereas, if these allegations are true, the Government is liable to be injured and defrauded unless the bonds so issued are recovered and cancelled and immediate action taken to protect the interests of the United States in a great public work; therefore,

Resolved, That the Committee on the Pacific Railroad be instructed to investigate immediately the circumstances attending the issue of United States bonds to the Central Pacific railroad, and to recommend such action as they may deem important to protect the interests of the Government, will leave to report at any time by bill or otherwise, and the committee be, and are hereby authorized to send for persons and examine witnesses on oath."

Edward McPherson, Clerk,  
by Clinton Lloyd, Chief clerk.

Under this resolution, the departments laid before the proceedings of Congress a great many letters and papers which I have already submitted and we obtained affidavits from all of our engineers who were at work on the line during 1867 and 1868, proving conclusively that the Central Pacific had never located a line over that country.

Secretary Browning's action came into a very severe condemnation and when we came to look into the question, we saw the injustice to the Union Pacific and Secretary J. D. Cox submitted the following letter to Hon. J. M. Howard, of the Railway Commission of the Senate:

Department of the Interior,  
Washington, D. C. March 17, 1869.

"The 8th section of an act entitled "An act to amend an act entitled "An act to aid in the construction of a railroad and telegraph line from the Missouri river to the Pacific ocean, and to secure to the Government the use of the same for postal, military and other purposes, approved July 1, 1862, approved July 2, 1864" (Stat. 13, P. 359) provides that whenever the chief engineer and the commissioners, whereof mention is therein before made, "shall certify that a certain proportion of the work required to prepare the road for the superstructure on any action of twenty miles is done, (which said certificate shall be duly verified) the Secretary of the Treasury is hereby authorized and required, upon the delivery of such certificate, to issue to said company a proportion of said bonds, not exceeding two-thirds of the amount of bonds authorized to be issued under the provisions of the act, to aid in the construction of such section of twenty miles, nor in any case exceeding two-thirds of the value of the work done, the remaining one-third to remain until the said section is fully completed and certified by the commissioners appointed by the President, according to the terms and provisions of the said act; and no such bonds shall issue to the Union Pacific Railroad company for work done west of Salt Lake City, under this section, more than three hundred miles in advance of the completed continuous line of said railroad from the point of beginning on the 100th meridian of longitude.

The 10th section allows the companies authorized to participate in the construction of this work to issue first mortgage bonds on their respective roads, property and equipment, to an amount not exceeding that of the bonds of the United States, and subordinates the lien of the United States to that created by said mortgage. This section was modified by the act of 3d March, 1865 (13 Stat. 504) which authorized any such company to issue its bonds to the extent of 100 miles in advance of a continuous completed line of construction.

The 2d section of the act of 3d July, 1866 (14 Stat. 79) authorizes the Union Pacific Railroad Company "to locate, construct and continue their road from Omaha in Nebraska Territory, westward, according to the best and most practicable route and without reference to the initial point on the 100th meridian of west longitude, as now provided by law, in a continuous completed line, until they shall meet and connect with the Central Pacific Railroad Company of California" and the Central Pacific Railroad Company of California are authorized "to locate, construct and continue their road eastward, in a continuous completed line, until they shall meet and connect with the Union Pacific Railroad; Provided, That each of the above-named companies shall have the right when the nature of the work to be done, by reason of deep cuts and tunnels, shall for the expeditious construction of the Pacific railroad, require it, to work for an extent not to exceed 300 miles in advance of their continuous completed line."

The Government has accepted the Union Pacific railroad from its eastern terminus to the 1,000th mile-post and the Central Pacific Railroad of California from the head of Salt Lake to Echo summit. A copy of his letter, marked "S", is herewith transmitted. It was believed that this action did not confer, and it certainly was not intended to confer, upon that company, an exclusive right of constructing its road upon the located route designated by the map then filed. The department from the lights then before it, simply approves that route. The equal right of each company to prosecute work over it, in a continuous completed line, until its road should meet and connect with the road of the other company, was not called in question.

Subsequently a commission was organized to examine both roads, and to determine the most eligible location over the country between the completed tracks of each. Instructions were issued, bearing date the 14th January last, (of which I enclose an extract marked "B") from which it appears that the "approval" of the Secretary was regarded not as a finality, but as still subject to his control when he should be in possession of the report of a commission appointed in part to elicit and present all the facts requisite to a definite solution of the question.

I send also a copy of a letter dated 15th December, 1868, marked "C", to the president of the Union Pacific Railroad Company and two letters to the chief engineer thereof, bearing date respectively 20th and 29th January last, marked "D" and "E".

I deem it vitally important to the public interest and the successful and harmonious prosecution of this enterprise that all conflicts between the two companies should be avoided. In the present state of our legislation, I apprehend that serious difficulties will arise. I am clearly of opinion that no work in advance of a completed line should be authorized, and that the 8th section of the act of 1864 should be repealed. Neither company should have the privilege of mortgaging its road beyond such line. I enclose a draft of a section which I respectfully recommend may be inserted in the pending House joint resolution which is now under consideration by your committee.

I am, sir, very respectfully, your obedient servant,

J. B. Cox, Secretary.

Hon. J. M. Howard, Chairman Pacific R.R.Com., U.S. Senator.

And be it further resolved, That the 8th section of an act entitled "An act to amend an act entitled "An act to aid on the construction of a railroad and telegraph line from the Missouri River to the Pacific Ocean, and to secure to the Government the use of the same for postal, military, and other purposes, approved July first, eighteen hundred and sixty two, approved July 2, 1864, and the proviso to the 2nd section of an act entitled "An act to amend an act entitled An act to amend entitled "An act to aid in the construction of a railroad and telegraph line from the Missouri River to the Pacific ocean, and to secure to the Government the use of the same for postal, military and other purposes, approved July 1, 1862; approved July 2, 1864"; approved July 3, 1866, be, and the same are hereby repealed; and no company mentioned in said act of July 2, 1864, shall be authorized to issue its bonds in advance of its completed line of construction." *Mrs*

This letter was drawn up by ~~me~~ and signed by Mr. Ames and submitted to the Hon. John M. Howard:

Washington, April 2, 1869.

Mr. C. P. Huntington, Vice President of the Central Pacific Railroad Company, undate of the 26th ultimo, has addressed you a published letter in regard to the contest between that company and the Union Pacific Railroad Company, to which I beg leave to make a brief reply.

These roads are required by Congress to meet and form a continuous line between Omaha and Sacramento. To stimulate the companies to the utmost effort to complete the whole line at the earliest moment, the law gives to each company so much of it as it constructs, with the subsidies of bonds and lands attached thereto. Under these provisions, the rival companies have put wonderful energy into the work, and its progress on both ends has been unexampled in the history of such enter-

prises. On the 20th day of October, 1868, their completed tracks were within 523 miles of each other. The Central track was 350 miles from Sacramento, and distant from Monument Point (the head of Salt Lake) 295 miles, and from the head of Echo canon 434 miles. The Union track was at Granger's, 875 miles from Omaha, 89 miles from the head of Echo, and 228 miles from Monument Point.

The possession of the line at or near this point is a great object with both companies, for it will exert a controlling influence on the trade of the Great Basin and the mountain region which surrounds it. If held by the Central, it will be borne to the Pacific coast; if by the Union, it will be gathered for the valley of the Mississippi and the Atlantic coast. It is therefore a quest on which affects the permanent business of the different roads and sections, and is not a contest merely of the roads. On the 20th day of October, 1868, the managers of the Union Company had fairly won this great advantage, not merely for themselves, but for the vast populations of the great valley and the Atlantic coast, by whose credit and means both ends of the road have been built. At that date their road was completed within 228 miles of that point. Under the law giving the companies the right to work 300 miles in advance of their completed line, the right to appropriate the point had therefore accrued to them.

Fairly beaten in this race, to which they had been invited by Congress, Mr. Huntington conceived the scheme of getting the law set aside by executive interposition and appropriating, in defiance of the plain letter and object of the law, the construction of 434 of the remaining 523 miles of the line. With his counsel he visited the members of the cabinet and imposed on some of them by statements respecting the condition of the rival roads. You may judge the character of them by the positive assurance he gave, orally and in writing, that the Central road would be completed to Monument Point by the 8th day of January, 1869, 80 days after the 20th of October.

Mr. Huntington now states that he endeavored to get the map accepted upon which the present claim was based as early as November, 1867, and that action was then postponed at the instance of the Union Company (see p. five of his letter) and that we objected. What was the objection? That our officers were looking for a better line. Does not this statement show that when first presented, it was not coupled with the claim of exclusive right under it, which he now makes, and that this claim was an afterthought? The first knowledge we had that any map was presented for any purpose was in May, 1868. The question then was whether the road should go to the north or to the south of the Lake; and as our engineers were then exploring the region south of the Lake, we wished for delay till their report should be received. Their report being favorable to the northern route, we made definitive locations on it as far as Humboldt Wells, and proceeded with our work. These definitive locations would have been filed, but the Secretary of the Interior on the 9th day of October, instructed the special commission to report on this very point. You are now asked to hold that this order was superseded by accepting the map which Mr. Huntington now admits was merely their preliminary line of 1867. This is Mr. Browning's language to the special commission: "You will report as to the most direct, central and practicable route from the end of the track to Weber canon, and from thence to the head of Salt Lake." The commission reported accordingly and they say that the located line of the Union Company is on the most "direct, central, and practicable line."

It was two months after the acceptance of this preliminary line before we got notice of it, and were requested to connect with it at the head of Echo. We were then beyond that point with our completed work, and such connection was impossible. I then drew up a remonstrance, dated 30th of December, denying that the map was in any sense a location which could affect our rights. But I did not then file it, as Mr. Browning said he did not regard it as a definitive location, or his acceptance of it as affecting more than was claimed for it when it had been previously offered, viz: as an indication of the general course of the road, with which our definitive location then on file sufficiently complied, and he ordered the inspection of three of our completed sections and recommended the issue of bonds and they were issued on two of our sections constructed on our own definitive location. So far from holding that the map accepted for the Central operated to vest the line in that company, he declared that under the law nothing but putting down the iron would fix the

This authoritatively disposes of the pretensions to superior construction by the Central Company, and this is their whole case. But there is an additional fact which ought to be stated to complete their exposure. Mr. Huntington harps throughout on the necessity of a continuous road; no officer can excuse the non-performance of any act or the omission of any duty; no incomplete bridge or temporary culvert can be tolerated, &c; the Central has never had any such indulgence; such an indulgence is an evasion and violation of the law, and the company can take no advantage from it, &c. &c. All this is met by the fact that the section of the Central from the 95th to the 114th mile was not accepted until July 9, 1868, whilst those from 114 to 138 and from 138 to 159 were severally accepted December, 1867, and January 6, 1868 and bonds issued as for a continuous completed track. The temporary track used by us whilst building the tunnel at Echo, to which Mr. Huntington excepts as breaking the continuity of the road, &c. was pronounced by the commission upon whom the law devolves the decision of the question a sufficient compliance with the law, and that they could not reject it, if offered, as part of the permanent road, because it comes within the law. We do not need the indulgence extended to them to skip a whole section, and we should not have received it if we had required it.

Mr. Huntington meets the telegram of Warren and Blickensderfer by saying that Blickensderfer was formerly employed by our company, and that Warren has been recently appointed commissioner by President Grant in place of Buoford at our solicitation. It is true that Mr. Blickensderfer was formerly in our employment and we then employed him probably for the same reason that the Government employed him since--because he was an experienced and capable engineer and bore the highest reputation in his profession and as a man of honor. The Secretary of the Treasury, on whose recommendation he was employed by the Government, knew he would be most exacting on he company, and the reprt shows that he was unsparing. As to the insinuation against General Warren, there is not the least foundation for it. No one connected with the company suggested his name for the appointment he has received from President Grant. He is better known to the President, probably, than to any one else, and his appointments was made, probably, without solicitation from any one.

"But," says Mr. Huntington, "there are some necessities which cannot be controlled by legislation. There are some lines of communication which will maintin themselves unbroken in spite of all human efforts to obstruct them. To attempt to arrest the construction of the Central road at Monument Point would be warring against nature. Its continuation to Ogden is one of those necessities which legilsation cannot control. It must be built there." The ridiculousness of this language digguises in a measure the insult it really conveys to Congress. You do not see the force of his defiance in the absu d gravity with which he announces that the laws of nature will overrule any legislation which prevents his line from going to Ogden. But the effect of what he says is simply that, as a coal bed has been discovered near Ogden, his road will reach it one way or another, with or without law. Here you have the explanation of all the trickery and falsehood to which he has resorted to accomplish this purpose. It is an avowal that he does not scruple as to the means he employs, and the last Administration was successfully appealed to to issue advance bonds on the line which Mr. Huntington avows his purpose to se-cure, right or wrong. Among the noticeable arts he employed to incline the President to his wishes were both fulsome encomiums on his Ad-ministration, and sneers at his successor. He adjured the President not to leave him in the hands of his successor. The Pacific railroad was the glory of his Administration. His Administration knew all about it; had, indeed, a knowledge which his successors could only acquire if at all, after long study, &c. When so much is committed to writing, it is safe to assume that there was much more of which no record remains. The result, I confess, is wonderful. Mr. Browning, who had so often proclaimed that the map he had accepted from the Central gave that com-pany no rights; that under the acts of Congress nothing fixed the right but occupation by a completed road, and that our definitive location on the route was as fully covered by his acceptance as theirs was, now, whilst the last sands of his power were running out, insisted that the right was vested in the Central by that map. There were in such haste, indeed, to fix the right of the Central, that they issued advanve bonds

without the affidavit required by law that the line was unencumbered by mortgages. Conscious, also, that the work had not been done for which the bonds were issued, nearly half of them were retained as security for its being hereafter performed. The transaction on its face shows complicity and fraud. The haste and secrecy which characterized it, the avowed distrust of the officers to succeed them in two days, without the favoritism which marked the dealing with the Central road, and antagonism to ours, its rival, shows that Mr. Huntington and his associates had, and were aware of having, relations with the past Administration which they could not count on holding with the present.

It is plain now, also that Mr. Browning understood and entered into the objects of the Central, which are now avowed, viz: to reach Ogden. The acceptance of the line to the head of Echo, and the notice to us to conform to it, after we had passed that point, was done merely to have some ground to recede from to delay our operations, and by appearing to yield, deceive us as to his ulterior purposes. To meet our efforts for a fair discussion of the subject with the President and Cabinet, the special commission which had already reported that the definitive location upon which we were building the road was "the most direct, central and practicable" to Monument Point, was dispatched again to report on the proper location between the two ends of completed track, with instructions to adopt either that of the Central or of the Union or one of their own, if they approved neither. But lest the commission might report too soon, Mr. Browning, without the knowledge of the President, added a fourth man to the commission in the person of a Division engineer of the Central Company. He had already substituted General Williams, one of the California commission, for Mr. Barnes. This he supposed, would secure a dividend report, whenever it should be made. But as it was important that no immediate report should be made, the Central Company refused to exhibit their maps of the route between the ends of the tracks, saying they were not ready. This secured the failure of the report before the 4th of March.

"Wait for the report of the commission" was then the answer given to us when any effort was made by us to get action; and when a rumor reached me that the Central was applying for advance bonds, and we made direct inquiry of the Secretary of the Treasury, about the middle of February, to know whether such an application was pending, and out of abundant caution filed a protest against it, the Secretary replied ~~that~~ there was no such application pending, and that if it was made it would not be allowed in the present state of the questions between the companies and before the report of the commission. Yet with the knowledge that such issue of bonds was claimed for no other purpose than to fix the rights of the Central Company against the Union Company, the consideration of which had been adjourned in Cabinet council for the report of the special commission, these bonds were issued. The first notice received by any person connected with the Union Company that such a question was presented, was two or three days after the close of Mr. Johnson's term of office, when we learned that the bonds were issued." Patt

1869

On March 30th, I submitted the following affidavit to the Committee on Pacific Railroads in the House of Representatives:

*Note  
-7*  
"I, Grenville M. Dodge, of Council Bluffs, Iowa, depose and say, that I am chief engineer of the Union Pacific railroad, and have been such chief engineer since May 15, 1866. I have had charge of all the surveys of said company, and have in my control all the matters pertaining to said position, and have personal knowledge of all the lines of road as far west as Humboldt Wells, and to the California State line, by the reports of my engineers, maps, profiles, estimates, &c. which are in my possession.

I spent the summer and fall of 1867 on the line, giving special attention to the line from Echo Summit to Salt Lake Valley and in the summer and fall of 1868 gave personal supervision of the surveys from Echo summit to mouth of Weber, and was in charge and made the location from mouth of Weber to Humboldt Wells in 1868. I have personal knowledge of all the lines run and locations made by the Central Pacific railroad, between Echo Summit and Humboldt Wells.

In 1863 and 1864, Mr. S. B. Reed, division engineer, made the examination for the Union Pacific railroad through the Wahstach mountains, confining his work from Green river to Salt Lake Valley, and decided upon and recommended the route from Echo Summit to Salt Lake Valley, over which the road is now completed.

In 1867 I caused a partial location of the line to be made from Echo Summit to the mouth of Weber; and in 1868, between the months of March and July, the final location was made over the route from Echo Summit to Weber canon, and from August 1st to October 1st, the final location was made from the mouth of Weber to Humboldt Wells. This is the only entire final location ever made prior to October 20, 1868, by any company, over the ground from the mouth of Weber to Humboldt Wells, and up to this date is the only final location made over the ground from Echo Summit to Ogden. No other company over this portion of the route have ever located a line or done any grading; and at this date, the track of the Union Pacific railroad is laid over this entire distance and to a point about 25 miles north of Ogden.

The following is a correct comparative statement of the surveys made and work done by the Union Pacific Railroad and the Central Pacific railroad, between Echo summit and Humboldt Wells:

From Echo Summit to Mouth of Weber Canon.

Union Pacific Railroad  
Run preliminary line in 1863  
and 1864 and filed it in the  
Interior Department.  
Located final line in the fall  
of 1867; and up to July 1, 1868.  
Filed it in the Interior Depart-  
ment in October or Nov. 1868.  
Opened work in May and by July  
had work on entire distance  
opened.  
Finished grading in January, 1869.  
Track laid to mouth of Weber  
March 2, 1869.  
March 2nd. Track distance from  
Ogden, 8 miles.  
March 2nd. Track distance from  
Monument Point 84 miles.

Central Pacific railroad.  
Run preliminary line in 1867 and  
filed it as located line in  
Interior Department in 1868.  
Never filed any other line except  
line of 1867.

Have never opened work.

March 2nd, 1869, End of track  
distant from Ogden 200 miles.  
March 2nd, 1869, end of track  
distant from Monument Point 120  
miles.

Between Mouth of Weber and Monument Point.

Run preliminary line in summer  
of 1867 as far north as Bear  
river.  
Made final location from July 15  
to August 30, 1868.  
Let contract to Brigham Young  
in May, 1868, for 50 miles.  
Opened work in August.  
Jan. 19, 1869, 1/8 of all grading  
done.  
March 27, Grading substantially  
completed except portion of 6  
miles.  
March 27, End of track 40 miles  
west of mouth of Weber.  
22 miles west of Ogden.  
54 miles from Monument Point.

Run preliminary line in fall of  
1867, accepted October 20, 1868.

Made final location as far as  
Ogden from Nov. 1 to Dec. 15, 1868  
Opened work in November.  
Jan. 19, 1869. About one-fourth  
of grading done.  
March 27. Grading about two-third  
completed.  
March 27, End of track 154 miles  
from mouth of Weber.  
146 miles from Ogden.  
70 miles from Monument Point.

Monument Point to Humboldt Wells.

Run preliminary line in June, July and August, 1868.  
Made final location to Humboldt Wells, Sept. 28, 1868.  
Opened work at Humboldt Wells and Independence Springs, Sept. 28, 1868.  
March 27, 1869. About \$200,000 expended in grading.  
March 27, 1869, Track 54 miles east of Monument Point.

Run preliminary line in 1867.  
Completed final location about October 20.  
Opened work at Monument Point and West about Sept. 1, 1868.  
March 27, 1869. Nearly all grading completed.  
March 27, 1869, track 70 miles west of Monument Point.

The following is a statement of time completed the track reached different points.

	Miles to	
1868.	Echo.	Ogden Monument
July 1 at Carbon	313,	376, 452
" 19 At St. Mary	298	353, 429.
Oct. 1 At Green		
River	122	185 261.
" 20 At Granger	89	154 230.
Dec. 28 At Echo Summit	63	139.
1869.		
Jan. 20 At 1000th Mile	Post	89 105.
Mar. 7 At Ogden		76.
Mar. 27, 22 miles W. of		
Ogden.		54.

	Miles to	
1868.	Echo.	Ogden, Mon
July 18 At Big Bend		
Truckee	610	546 470
Oct. 20 At	434	371 295
1869.		
Jan. 11 At Tulasco	298	235 159
Jan. 20 At Hum. Wells	284	221 145
Mar. 7 E7 miles West	247	184 108
Mar. 27 75 miles East	209	146 70

The 100 miles over which bonds were prepared for issue, and partly issued to the Central Pacific railroad, extend from the vicinity of Ives' pass, which is about 50 miles east of Humboldt Wells, east to the vicinity of Monument Point.

The 80 miles over which bonds were prepared for issue, and partly issued to the Central Pacific Railroad, commence about 8 miles east of Monument Point and extend to a point about 6 miles east of Ogden.

The map filed in the Interior Department, which pretends to be a location of the Central Pacific railroad from Echo Summit to Monument Point, and from Monument Point to Humboldt Wells, I know to be false and fraudulent, as I have been over the entire ground since the maps were sworn to May 15 and July 18, and no located line existed on the ground. I met the Central Pacific engineers during August, September and October, locating their lines on the ground conversed with them, and obtained from them copies of profiles and maps, and they never pretended that the line that had then been filed was anything but a trial line; and every foot of line that the Central Pacific railroad has graded or worked on between Humboldt Wells and Ogden has been located since their maps were filed, and very little of the entire location is upon the same line represented on the map accepted October 20, 1868. The line is only a trial line, without curves, with stakes 500 feet apart, and run in 1867, and the map, in my opinion, was intentionally so made that it is perfectly useless in an engineering point of view, or for the purpose of retracing it upon the ground. It has no topography, no stations, no courses, no angles, no scale; nothing by which any line could be identified by it on the ground.

It was received in direct violation of the instructions of the Interior Department, and does not comply with the requirements of the Department made upon the Union Pacific railroad upon filing their maps.

It was received in direct violation of the instructions of the Interior Department, and does not comply with the requirements of the Department made upon the Union Pacific railroad upon filing their maps.

property in either company and that either might use the others grading if it reached it first with its completed track. This is unquestionably the law; and the application to your committee by Mr. Huntington for legislation to terminate our road at Ogden, is an admission that he cannot stand on the law as it is written. He thinks he has demonstrated "that there is no reason or occasion for the interference of Congress at the present time" to fix the terminus of the roads, and yet you know that he and associated alone have brought the subject to your attention or that of Congress.

Contemporaneously with and as a part of this movement in the Executive Department to set aside the law, and give the Central, which hitherto has built one mile whilst the Union has built two, 434 of the 523 miles which remained to be built, a concerted clamor was raised that the Union Company's work was badly done. The commissioners upon whom alone the law placed the decision of the question, whether the work was faithfully performed, had declared that it met the requirements of the law. But a special commission was appointed, which reported that it would require about \$3,000,000 to bring up the road to a first-class standard. The deficiency consisted in temporary culverts, trestle work, &c. which the company was rapidly superseding with masonry and solid work. A great deal of this work was in progress and large sums had been expended for materials, &c. But the commission did not credit the company with any part of this expenditure in their estimate of deficiencies. Their report has been published by Congress and you cannot fail to see the commissioners did their work thoroughly, and were very exacting for the Government. The bonds due on our completed work were withheld till we gave ample security to perform all that was required of us by the commissioners. The rival company was dealt with in a very different spirit. Their California commissioners reported immediately by telegraph that all was satisfactory on that line. Then came a preliminary report in the same vein. Their detailed report was not forwarded till after the public mind had been fully impressed with the idea that the Union road was crazy and a fraud throughout on Government and the people, and that the Central was as solid as the Sierra, and the requirements of the law more than met by that company. No bonds were withheld from them upon it, although showing also a deficiency when it did come; and yet this commission, acting as the circumstances I have mentioned demonstrate, in the interest of the company and not of the Government, when they come to make a detailed report, show that the deficiencies in the work of the Central are just double those of the Union. Thus, on a line of 450 miles, only about half the length of the accepted line of the Union, they admit a deficiency of \$910,000 and to reduce it to that sum, they credit the company with all the material, &c., purchased to supply the deficiencies, but not yet applied. As already stated, the Warren commission allowed no credit whatever to the Union company for such expenditures. Deduct these credits from the Central and apply the same rule to it which was applied to the Union, and their deficiencies amount to about \$3,000,000--exactly the amount required on our accepted road of double the length. Seeing the different spirit which animated the two commissions, we demanded of President Johnson that the Central should be examined and reported upon by the same men who had reported upon our road. We knew that no impartial men could fail to compare them otherwise than favorably to us, and the following telegram justifies our confidence:

Salt Lake, Utah, March 19, 1869.  
(Received at Washington, D.C., March 20 1869.)  
To Hon. J. D. Cox, Secretary of the Interior:

The report on the Central Pacific railroad will require time. We think you should know that we who have seen both deem the Central Pacific railroad as incomplete as the Union Pacific railroad.

G. K. Warren,  
Brevet Major General U.S.A.  
J. Blicknsdorfer,  
Special Commissioner.

Over one portion of the line of this map, from Ogden to the mouth of Weber, no location has ever been made. One portion, from Ogden to Monument Point, was located between November 1, 1868, and January 1, 1869, and from Monument Point to Humboldt Wells between July 1, and November 1, 1868. I was on the ground from July to October 15, and have full personal knowledge of the facts, and also have been constantly in receipt of letters and telegrams from my own parties who have never been off the ground, except during the winter months, from the summer of 1867 to the present time.

On the 20th of October, 1868, the date of the acceptance of the map of the Central Pacific Railroad, the Union Pacific railroad had its line located to Monument Point, its grading mostly finished to the mouth of Weber, and had opened its work west of the mouth of Weber and at Independence Springs and Humboldt Wells.

The Central Pacific Railroad, on the other hand, up to October, 1868, had located no line (except a few miles of temporary surveys over the east slope of Promontory range, which they abandoned) between Echo Summit and Monument Point, and had only partially located their line from Humboldt Wells to Monument Point coming from the west. They had opened work west of Monument Point on the Mormon contract, extending 100 miles west of that point, but had done nothing east of Monument Point. Today, March 30, the Union Pacific railroad grading is nearly completed to Monument Point, except about six miles. Its track has been laid over three-fourths of the line that the map covers between the head of Echo and Monument Point. Its track is now within 54 miles of Monument Point and since July last and until within one month, its track has been 150 to 200 miles nearer Ogden and 50 miles nearer Echo summit than the track of the Central Pacific railroad.

With the completed road of the Union Pacific Railroad Company, I am thoroughly and personally acquainted and am now well advised of the completed portion of the Central Pacific railroad, having the reports of several engineers who have been over to examine it, and I have no hesitation in asserting that the Union Pacific railroad is better constructed, better equipped, and will cost less per mile to bring it up to the standard than the Central Pacific railroad. It has lighter grades, less curvature and is superior to the Central Pacific, passing through a country where rock is plenty, has better masonry than the Union Pacific railroad. The Central Pacific railroad has no permanent complete shops; has fewer stations and inferior tanks, and a large amount of trestle-work that it will require great expenditure to fill up. The following telegram of the two commissioners who had, when it was sent, examined both roads is sufficient proof on this point:

Salt Lake, Utah, March 19, 1869.

Received at Washington, D.C. March 20, 1869

To Hon. J. D. Cox, Secretary of the Interior:

The report on the Central Pacific railroad will require time. We think you should know that we who have seen both deem the Central Pacific railroad as incomplete as the Union Pacific railroad.

G. K. Warren,

Brevet Major General, U.S.A.

J. Bickensderfer,

Special Commissioner.

The first our company learned that the Secretary of the Interior had--October 20, 1868, accepted the map of the Central Pacific railroad, was on receiving his letter of December 16, 1868.

Immediately--about December 19--Mr. Oliver Ames, President, and Mr. Oakes Ames and I, went to the Secretary of the Interior and protested against his action. Secretary Browning stated that the acceptance gave no rights whatever to one company over the other; that the map was only accepted as a general route which both companies must conform to; that each company should keep on building and that it should receive its bonds as fast as the road should be completed and accepted by the commissioners. He made these statements over and over again, and in answer to my suggestion that the Central Pacific road claimed to have acquired rights by this acceptance he scouted the idea; said that such construction was impossible, and that we should have our bonds as fast as our road should be completed. I asked if we must conform to the grades and alignment of this map, which were far inferior to our own located line. He replied that we need not conform to them; that such was not his intention; that he wanted the best possible line, so that the two roads would meet and connect and not pass each other.

About January 12th, our track being completed to the one thousandth mile-post, passing over about thirty miles of this line of the Central Pacific railroad which had been accepted October 20, 1868, we applied for the bonds due us on 40 miles of track, and they were promptly issued.

After the order for their issue, Secretary Browning cited to me this fact as proof of what he had previously stated, that the acceptance of the map did not affect our right to build our road over this route and receive bonds therefor, and he said that he would continue to recommend their issue to us upon our complying with the requirements of the Government.

The Secretary of the Interior also, on January 14, 1869, instructed the commissioners who had examined the various roads to determine the best line between the ends of the two tracks, and recommend its adoption; and also to report their opinion as to the point where the two roads would probably meet, and after reporting upon these points to ~~ex~~-examine both roads under their prior instructions of October 9. The Secretary communicated these instructions to me, and said that his anxiety that the roads should meet and connect and not pass each other, had led him to instruct the commissioners to designate the point where they would be likely to meet.

In consequence of these representations of the Secretary and of his instructions to the commissioners, our company remained satisfied and did not present to the Secretary of the Interior our letter which had been prepared December 30, objecting to the acceptance of the map on October 20, 1868; but February 10, 1869, learning that the Central Pacific Company claimed exclusive rights under that acceptance, and threatening litigation, we addressed the Secretary a letter of that date, enclosing that of December 30, and asking a revocation of his consent and approval of the map.

Some time in the latter part of February, I heard that the Central Pacific railroad were endeavoring to obtain bonds from the United States in advance of their completed track. Mr. Oakes Ames and I immediately called on Secretary McCulloch. He told us that no such action was intended; that we might rest assured that no bonds would be issued in advance of the completed track; and he mentioned as a reason for this determination, that the commissioners were out examining the very question involved. The company about this time filed with the Secretary of the Treasury a protest against the issue of any bonds to the Central Pacific railroad on uncompleted work, and also copies of our letters to the Secretary of the Interior asking a revocation of the acceptance of the map. We also obtained assurances from President Johnson that no such bonds should be issued.

We rested upon these assurances, and I knew nothing of any issue of bonds to the Central Pacific railroad until after March 4, when I learned that \$2,400,000 of bonds had been prepared for issue to the Central Pacific railroad, over 180 miles of road alleged by them to have been partially completed, of which amount \$14000,000 had been actually issued, one million being withheld at the suggestion of a member of the Cabinet.

Upon application to the present Secretary of the Treasury, I was allowed access to the papers on file, and found that the bonds had been ordered to be issued as above stated, notwithstanding the objections filed by us; and I also found upon file certain letters of the Central Pacific railroad, and long arguments and statements submitted by their officers and counsel, none of which, until I made this application, had been seen by or were known to any officer or agent of our road. These papers are full of false charges, gross errors, and deliberate misrepresentations of law and of fact, intended, as I believe and aver, to hurry through, during the expiring hours of the late administration, in unfair secrecy, the issue of bonds to which the Central Pacific railroad had no right, and the issue of which was an injury to and fraud upon the Union Pacific railroad and the Government.

Upon examining the certificate of Messrs. Bigler, Henley and Denver, it appears that they and S. S. Montague, chief engineer of the Central Pacific railroad, certify on oath that the value of the work done by said railroad on the 18th of January, 1869, on one hundred miles of the line claimed by them between the 560th and 660th miles, is not less than two millions of dollars, and that the value of the work done on said 18th of January on eighty miles of said line between the 660th and 740th mile is not less than one million six hundred thousand

dollars.

In contradiction of these statements, I state that the lines of the Union Pacific railroad, the surveys of which are now in my possession extend over substantially the same ground over which the Central Pacific line for the above 180 miles passes, the line of the Union Pacific railroad, however, having lighter grades, and therefore requiring heavier work; and that our estimates of earth-work over the above mentioned one hundred miles made by me personally upon the ground were as follows:

176,170	cubic yards	earth excavation.
1,768,945	" " "	embankment.
29,137	" " "	rock excavation.

The earth-work at 40 cents per yard, and the rock work at \$3 per yard, makes the cost \$796,165 or about \$8,000 per mile. There is no bridging on the one hundred miles except at the crossing of small streams and ordinary culverts, and my estimate for bridging and culverts is not to exceed \$2,000 per mile, making my estimate for fully preparing the road for the superstructure over the one hundred miles not to exceed one million of dollars.

My estimates over the above-mentioned 80 miles are as follows:

2,056,370	cubic yards	earth excavation and embankment.
108,987	cubic yards	rock excavation.

The estimate of the cost of the work at the above rates is \$1,149,110, or about \$14,000 per mile on an average. The rock work, except 3000 yards, is all upon the six miles over Promontory range, and the estimate of the average cost of the work, excluding these six miles, is not to exceed \$9.00 per mile.

It is not possible that on the 19th of January, 1869, there had been performed by the Central Pacific railroad over the 100 miles already described, work necessary to prepare the road for the superstructure, of the value of \$2,000,000 or that on said date there had been performed by said road on the 80 miles above described work necessary to prepare the road for the superstructure of the value of not less than \$1,600,000. The well-known character of the country over which all the locations pass, and the well-known prices for work in the vicinity of Salt Lake, as well as our actual estimates, all prove the falsity of the certificate of the commissioners.

I make the foregoing statements in aid of the application of the Union Pacific railroad to have the acceptance of the map on October 20, 1868, revoked, and the order to issue bonds to said Central Pacific Railroad Company cancelled; and as an officer and representative of the Union Pacific railroad, familiar with the location and progress of both roads in the vicinity of the territory now in controversy, and with the history of the roads, I assert that the acceptance of the map, the application and obtaining the order for bonds over the 180 miles, above described, were arranged and contrived by the Central Pacific railroad for the purpose of extending its road over a line where its officers and agents knew they would not by law be entitled to build; over a line which they knew the Union Pacific railroad, by law, and the rapidity of the construction of its road, were and would be entitled to build; and that this action on the part of the Central Pacific railroad was an unworthy device, secretly perpetrated during the closing moments of the administration of Andrew Johnson, for the purpose of obtaining an unfair advantage of the Union Pacific railroad, and of injuring and defrauding the Government by obtaining bonds to which the Central Pacific railroad had no legal or equitable right.

GRENVILLE M. DODGE.

Personally appeared before me, a Notary Public for the country of Washington, D. C., G. M. Dodge, and made oath that the foregoing affidavit by him subscribed is true to the best of his knowledge and belief.

N. CALLAN? Notary Public.

This investigation of the Congress soon satisfied the Central Pacific Railroad that they had no case before Congress or the present administration and they immediately gave up all idea of building beyond Ogden or receiving any bonds there for because Secretary Browning, before he left his office, accepted 40 miles of completed road from Echo west over the ground which the Central Pacific claimed the right to build. This action of Browning made null and void all the demands and orders that we should connect with the Central Pacific at Echo.

As shown later on, the settlement that I made with the Central Pacific was beneficial to the Union Pacific and stopped all further controversy.

The Fisk suit kept us from organizing our Board of Directors which was creating a great deal of anxiety in the West. I had written Mr. Dillon giving him my ideas of the settlement with the Central Pacific and <sup>to</sup> ~~stop~~ all fighting in the House and devoted our full attention to our own matters, and on March 30th, 1869, I received the following from Mr. Dillon:

Omaha, 1869.

"Received your letter this moment, just as I start for Springfield to meet Ames and Duff. I think well of your proposal. Will telegraph you from there."

I also received a dispatch from Seymour that the evidence which had been collected in Salt Lake in relation to the location and construction of the two lines was all in favor of the Union Pacific line, which I knew would be so for the Central Pacific had done absolutely nothing over the line they were claiming bonds upon.

on March 31st  
I wired to Seymour and asked him what was the furthest point possible for us to reach with our track: He answered: from Omaha,

"With plenty of track material and work driven to utmost on West slope of Promontory Point, I think we may reach Monument first; otherwise not."

This settled in my mind that if I could compromise on Promontory summit as a point of meeting, I would do so. Snyder wired me that he thought we could make Monument Point sure.

1869.  
On March 31st, I received the following letter from Snyder:

Omaha, March 31, 1869.

"Yours 26th received this morning. I have been firing at C.P. for past ten days through press of Chicago, Cincinnati, Albany, &c. N.Y. papers have refused to take dispatches and letters favorable to the road. Dispatches paid for here. I am trying them again today.

Blickensderfer not in this morning as expected; stopped with other commissioners. I have sent men out to meet him and get items that you requested, which I will telegraph.

Have paid men in shops here for January; also paid about \$20,000 at Cheyenne and Laramie shops for January. Owe balance of men for wages since January 1st. Have been able so far to pay discharged men and those who quit of their own accord. Can't stand it much longer and I fear trouble daily. Banks and business men of Omaha hold our paper for \$600,000. Chicago about the same. We owe largely for fuel on line of road. Not much indebtedness in towns besides Omaha and Chicago. Must pay employees and fuel contractors to keep road going.

Miller's article in Herald very good; and I will have it copied in Chicago papers."

In relation to my supposed agreement with the Central Pacific, I received the following from Mr. Oliver Ames:

North Easton, March, 12, 1869.

"I wrote you yesterday on matters of U.P.P.R. but today I have your letter of 10th, and also agreement made with Central Pacific railroad. That part of the agreement giving the Central Pacific bonds on the road we build beyond Ogden is an outrage upon us and ought never to have been consented to. We have burdens enough to bear to have some little help in bearing them, but for us to give to the Central these bonds and let them pay us for the road when they get ready will I fear break us down. I can't conceive how you ever should have consented to it. If you had known the condition of the company you would not have done it. Certificates for these bonds have already been sold and it calls upon us to raise money at once to redeem them. When if you had stood for bonds of Government on all the road we build we should have gotten them and had part of our pay, while as it now stands we shall have a quarrel with the C.P. to get any pay out of them.

The rock and earth work is put down very much below what it is costing us. The feeling among our people is very strong against the surrender of the bonds and limiting us to actual cost of the road; in fact, very much below what the road has cost us this winter. The letter you say you enclosed me with instructions to Chandler is not received. When it arrives I will communicate with Mr. Chandler, giving him such instructions as the interests of the road may require.

I think, as we have a good office at Omaha, and it is quite necessary to have your office in close connection with the general office of the company, it is inexpedient to remove the same until after the completion of the road and bridge. I should feel if superintendent of the road it would be a great convenience to have the engineer and land office in close connection with the general office.

In my letter to you yesterday, I sent you a discharge of Col. Seymour from duty on the line of road, to be sent to him or handed to him as you should see fit.

We are raising some money to send out on the road but the severe money market and loss of our securities and credit by this compromise makes it hard work for us to do it. We will, however, do what we can, and may, I think we shall, be able to get enough to put our rails together.

Mr. Duff has gone to New Haven today and will go to New York tomorrow, and will in a few days go out on the road with you. He wants to get money enough to pay up the most pressing labor claims before he goes."

I was very anxious to have the friends of the Company understand fully our position in this contest with the Central Pacific as they had been using it against us with considerable effect and on April 1st, 1869, I wired Messrs. Hall, Ayres and Co., who were a railroad supply concern as follows:

Washington, April 1st, 1869.

"Great efforts are being made by legislation and otherwise to stop our road at Ogden when our track has now passed Ogden twenty-five miles, and the Central road is 150 miles West of that point. Get the Tribune and other papers to denounce this and demand that the two roads shall continue till they meet, and have the substance of their articles telegraphed to the eastern papers."

On April, 2, 1869, I wired Mr. Ames as follows:

Washington, April 2nd, 1869.

"See letter to Dillon sent tonight. An avalanche of telegrams to me from Omaha for help. Omaha National say unless they get it tomorrow they will go under. You should make a great effort to save your friends out there."

Mr. Snyder

On April 1st, 1869, Mr. Poppleton, wrote me as follows:

Salt Lake City.

"I reached Salt Lake City on the evening of the 24th and the next morning received a telegram from Brigham City, in relation to affidavits, from Col. Seymour, and also your telegram directly me to co-operate with S. in taking testimony. I left Salt Lake City the morning of the 26th and returned again on the evening of the 30th, having spent the intervening time in taking testimony at Promontory Point and Brigham City, and yesterday morning I sent all testimony taken by Wells, Fargo & Co. to Echo City where it will go by special messenger to Washington, as directed by Gen. Dodge.

I find as yet no move on the part of the Central Pacific Railroad towards a litigation but think it is inevitable within the next 30 days unless Congress unites the knot. The two tracks cross each other once east of Promontory Point and several times beyond it. Whenever we lay track across their grade, as we will within the next ten days, I think the ball must open.

I have lost no time in making myself familiar with the organization of the courts and laws of Utah, and feel that I am already familiar with the ground. My judgment is that the courts and judges both are ignorant and uncertain and when once launched in litigation no one can tell where it will end. For these reasons it is very desirable that the points in the controversy should be settled by Congress if possible, and I think you should urge upon Gen. Dodge this view of the matter.

In the peculiar situation of affairs here it does not seem likely that I will be able to leave for some weeks. In the meantime I wish you would post me on anything important transpiring in New York, as I am utterly without information since I left."

On April 1, 1869, Mr. J. D. Cox, the Secretary of the Interior, furnished me a list of the dates of the filing of all the maps of the Central Pacific railroad.

1869  
On April 2nd, I received the following communication in relation to the letter of Simmons to Grant: from Snyder:-

Salt Lake City.

"I telegraphed you this morning that I had seen J. M. Simmons. The result of a long interview with him is this: Simmons, up to a short time ago, was an engineer in Capt. Bates' division, and he ascribes as a reason for his writing that letter to President Grant, that he had been relieved by said Bates and took that measure to obtain his revenge.

He states that the worst kind of a coolness is now and has been existing between the engineer corps and the contractors, and that up to the 1st day of January of this year, there were two accounts kept in the banking house of Hussey, Dahler & Co; one called miscellaneous, the other road account, and each one had a balance upon that day of a quarter of a million, more or less. Furthermore, that there are no vouchers existing stating what those balances represent or for what they are kept, save that they are the products of gigantic stealings; furthermore that he made out an exhibit or rather copied one at the instigation of said Bates, and that said exhibit is now in the possession of S. B. Reed.

Item No. 2. That S. B. Reed sub-let a contract for ties to Brigham Young, Jr. and stipulated to pay \$10 per day for each item, and he is cognizant of the fact that vouchers were given for four and complete work according to the tenure of the contract, whereas there would only be one load of ties delivered within a space of 5 days.

Item No. 3. That one, Jones, Chief tie Inspector of the Construction, was fully aware of the fact, that about one third of the ties contracted for were really delivered, and that he gave for them vouchers for full amount, reserving for himself a heavy percentage over and above the stipulated percentage allowed, and that S. B. Reed was in full knowledge of said fact and received a commensurate sum. And so he goes on enumerating such like proceedings, proving collusion with the heads of the construction, and they in turn with sub-contractors and moths of lesser magnitude, that have been fluttering around the lamp of construction.

I met last night another member of the Engineer Corps, who proves conclusively that the road from Wahsatch west can be and was built at a cost of between thirty and thirty-two thousand dollars per mile, whereas ninety-six thousand was the price charged.

Now the inference I draw from all these reports is this that we have a key to a vast amount of corruption and theft in the banking house of Hussey, Dahler & Co; they possess and have knowledge of private accounts, and accounts for private purposes under fictitious titles. The question is have you any power that can force this house into disgorging these statements both true and false? If you have, the matter can be exposed by comparing vouchers, and accounts with apparent work performed.

It is not in my power, neither would it be province to attempt to obtain any information from them directly on the subject; furthermore, within a short time back contractors and sub-contractors have been extremely reticent on matters pertaining to their departments. I remained in Echo City, Mr. Reed's headquarters, an entire day without hearing or learning anything of importance save this: One Major Davis' chief clerks told me that the jig was nearly up with them. I presume he had reference to Davis and associates. So under the circumstances I conclude that to learn any news one must go away from home.

Col. Seymour is now at Brigham City, a point I will reach in a day or two, and I will wait here until tomorrow to receive any advice that you might have seen fit to forward. Mr. Poppleton desires me to visit the above place also Ogden, in as much as one, Judge Robinson, of Sacramento, counsel for the Un. P. is at one or the other of these places and Mr. P. thinks is here to commence suit in the U.S. Court against this road. He wishes me to aid him in finding out this particular. A certain Mr. Yates, brother to the Cashier of the 1st National Bank at Omaha, and assistant to Engineer House, informs me that the arrest of Durant and the injunctions of Fisk, Jr. are nothing more than the carrying out of a programme by which said Durant and Fisk will obtain entire control of the road by producing a state of affairs (which they certainly have done) and so involving the road in financial disaster as to force a sale of the 1st mortgage bonds, and with the aid of what stock they hold obtain the road into it virtually,

Of this particular you doubtless know more than either he or I, but in as much as I have been sent out to become a faithful chronicler of events and doings, I give it to you for its specific value. Such being the case I give you a telegram received in this city a few hours ago, and which I presume will appear in the evening papers. That Durant was in confinement under guard, and that the railroad officials in Omaha had left the city.

During my conversation this A. M. with Simmons, I came to the conclusion that his notice for writing that letter was out of a pure spirit of malice in the hopes of alleviating to ascertain degree the chagrin he was chaffing under by having been removed. There is no doubt but that he made money during his official career, for upon his retirement, he was enabled to buy out a large restaurant in the Revere house of this city. You may safely rely upon his statement being in the main correct, as I dont think he has any desire to obtain money for what information he did or may possess.

The general feeling in this city is that the road is bankrupt, and what few people I have seen that have any money invested are swearing eternal vengeance on the contractors in general and T. C. Durant in particular, and merchants here are not in the least backward in pronouncing it the most gigantic swindle ever perpetrated upon a credulous and outraged public.

If I can possibly obtain any further information from this point, I will immediately forward it; if not, my next communication will be from Brigham City or Corinne. If I should leave this city before receiving any advice from you, should you forward any, I will inform Mr. Poppleton of my whereabouts that he may be able to remail to their proper destination."

On April 2, 1869, I received a letter from Hale, Ayer & Co. from Chicago, as follows:-

*Not*  
"Your telegram was received today. The writer immediately called on Mr. White, the Senior Editor of the Chicago Tribune, and he promised the writer that he would write a good, strong article expressing himself strongly that the U.P.R.R. had right on their side unless there was something in the law as to the point of meeting fixignit at a given point.

We came to the conclusion it was not advisable to have an article on that subject published at the same time, as it might look as if it was gotten up for this particular occasion by concert of action among the Journals of the city. Tomorrow will endeavor to have an article in some other paper. If there is anything we can do for you further command us and we will obey. I have written Senator Carpenter, who is an intimate friend of the writer, in behalf of the Union Pacific."

On April 2nd, 1869, from Washington, I wrote General J. D. Cox, the Secretary of the Interior, my protest against the Central Pacific covering any of our territory, as follows:

"I respectfully request your attention to the provisions of Sec. 6 of the act of July 2, 1864, relating to the Pacific railroads, and I respectfully request that you take such action as you deem best to prevent the examination of any of the completed sections of the C.P.R.R. so long as the completed sections of the U.P.R.R. are withheld from examination. I ask this that both companies may be treated alike and that neither shall through the commission or omission of acts on the part of the Interior Department gain any unfair advantage one over the other."

On April 2nd, 1869, I wrote to Messrs. Ames, Dillon, Price and Duff, committee in charge, in relation to the information given me by Mr. Blickensderfer on the building of the bridges across Green River and Blacks Fork, across the temporary track instead of on the main line,

as follows:

Washington, D. C.

"I have learned today, from the report of my engineers, that in the building of the bridges over Green River they are preparing to put it on the present line run. Although I have no charge or supervision of this matter, yet I deem it my duty to most respectfully protest against this and request that it be put on the line located. I do not think that line of too much angle to the stream to make any great difference in cost, at any rate not so much as the increased curvature on present line.

I also am informed that they are preparing to put the Truss Bridge over Black's Fork to one side of the main located line, thus breaking up the tangent and very materially increasing the curvature. Against this I most earnestly protest and urge you to immediately notify the contractors that these bridges must be built on the located line or they will not be accepted by the Company. The masonry on Bitter Creek, I am also told, is very inferior, the foundation above low water, &c. In the rebuilding of all structures great care should be had to make them permanent, and I hope positive instructions will be given in these matters."

On April 3rd, 1869, I received the following letter from Mr. James A. Evans showing our financial condition on the line of road. This came mostly from the suites of Fisk in New York:

Omaha, 1869.

"I have written you with regard to the bridges, but the desire to write you about matters more private is irresistible.

Matters here financially are in a very critical condition; a spark liable to drop any minute that would throw everything into confusion. It doesn't seem to me that matters can possibly hold together a week longer.

The Omaha National Bank, in which we are both interested, I find today have advanced to Snyder to pay off discharged men some \$55,000. They hold in addition vouchers enough to make their claim \$100,000. Talking with Millard this morning I told him that I would write to you asking you to give the matter some attention. The assistant Cashier is now in New York seeing to the matter. Millard claims that Mr. Ames promised verbally that if anything of the kind was done as to make it a matter of honor to pay it. Snyder feels so and I hope it will be arranged soon.

What I am afraid of is that somebody will pitch in and stop the running of the road by attaching rolling stock; this will certainly happen unless relief comes soon. Crane telegraphed today that funds would be here next week. I dont know if the thing will hold together till then.

From a telegram send me by Snyder two weeks ago, asking about taking charge of construction and coming primarily from you, I hoped that matters would so shape as to make the getting rid of the thieves at the west end possible. Now it seems from what I can learn that the undignified and disgraceful quarrel in New York will last, and that matters will continue in the same old ruts."

On April 3, 1869, I received the following from T. C. Durant in relation to Snow's conduct:

New York, 1869.

"I think Hoxie can post you on Snow's conduct. The proposition for us to give him a coal contract was made through a third party. I will obtain permission of the party to have his name used. At present I do no know how far I am to consider it confidential. Nos. 2 and 3. Have the bon's we have deposited in the Treasury

Dept. counted to see if they are all there. I think there are stolen bonds on the market."

Upon receipt of my letter, Mr. Ames gave orders to have the bridge across the Green River and Black's Fork put on the main line.

On April 3rd, 1869, Mr. Snyder wired me from Omaha as follows:

"Evans here; says bridge at last crossing Black's Fork changed by Seymour, who insisted upon changing all as to crossing west of Granger. He coincided as line distorted, but little better crossing; second piles can be driven as is necessary. Other crossings are being made on established line."

On April 3rd, 1869, I also received the following letter relating to the Fisk suit in New York:

New York, April 3, 1869.

"Your letter and report from Blickensderfer is received. I am glad to hear from you in regard to the location of those bridges. They must be put in right place and I will see Duff next week and have it attended to.

Things are looking better today. I saw Mr. Tildon this morning. He thinks case will be removed; if it is not our folks, Duff and all hands are awake, and are determined to take all of our matter to Boston, that is the contractor's part, which is the whole. They raised \$300,000 yesterday to pay off drafts from the West and to take up bonds that were pledged at 50 cts. on the dollar. We have had a hard time of it for the last three days but I think we are over the worst of it. We can go on if the case is not removed. They are all determined to raise money enough to put the thing through and they have gone to Boston to do it.

I think some of us will go out on the road next week to put things straight and hope that you may be able to be with us for we want your advice. As for responsibility in Washington, take it and I will back you up in it. We pay \$100,000 to go West today. Say to Snyder to keep up good courage, we will be with him soon. Let me hear from you soon."

Signed, Sidney Dillon.

Mr. Tildon was our Attorney in New York and our people had made up their minds to get a law through Congress authorizing us to make our headquarters hereafter in Boston, which was done.

On April 3, 1869, I also received the following letter from Mr. Evans on the question of bridges across the streams, heretofore mentioned:

Omaha, April 3, 1869.

"Happening into the officer here yesterday, I was able to furnish the information conveyed to you by Snyder in reply to your telegram. In answering your dispatch of this morning, it was impossible to be as explicit as I mean to be in this letter, in which I propose to give you the whole history of the bridges west of and including Green River so far as I have anything to do with them.

1st. The Green River Bridge: Here the foundations are started above and close to the bridge now in use. The angle differs slightly coinciding on the west side and on east side so far from present track as to avoid the necessity of removing the water tank. This gives a crossing nearly at right angles with the thread of the current. With regard to this crossing, I think this is right, at any rate it is much better than the one first located.

2nd. First crossing of Black Fork (west of Bridger). This is being put in on main line; foundation is good. They are ready and masonry is now being put up.

3rd. Crossing of Black Fork. This will be put on present line, the foundation being same as last so that we can work and use present bridge. Nothing done here yet. This is the best temporary bridge we have over Black's Fork, which is the reason we leave it till last.

4th. Ham's Fork. This bridge is on main line; foundations are ready for masons.

5th. Third crossing of Black's Fork. This bridge is to right of line. Foundations rare excavated and piles being driven at the bridge and the one above piling is absolutely necessary. It would be difficult preparing the foundations on the present line and t same time using the road. This it seems to me is the only reason for changing them.

6th. Fourth Crossing of Black's Fork. As stated before to right of line; foundation prepared and masonry started. With regard to two last bridges there is nothing saved in amount of bridging nor in direction except with regard to the form which is a better crossing, not enough, however, to make any change were it not for the difficulty of getting in the piles.

Now, as to my connection with the matter. It is pretty generally conceded that all the bridges referred to should be secured. In February meeting Dr. Durant at this place (Omaha) he requested me to see the foundations of the bridges, which I told him I would do. Upon going west, I found that Seymour had started the bridge over Blacks Fork (4th crossing to right of line). My determination was then to have nothing to do with the matter, but you know that I am interested in this bridging, having the most of them framed and some in transit, that it occurred to me that it would be wisdom on my part to maintain some kind of a connection with the business, and I have therefore paid some attention to the matter. If I had not done so all of the crossings would have been changed, for which no possible reason could be given other than such as would be likely to occur to S. S. The Dr. previous to leaving here gave him pretty extensive power.

With reference to the Green River crossing, I am sorry that I cant agree with you and Mr. Blickensderfer. My impression is that it would be ruinous to advocate the adoption of the old crossing."

On April 3, 1869, in answer to Mrs. James A. Evans's letter, I sent him the following dispatch from Washington:-

"I will not agree to or accept any bridge built over Green River or Black's Fork except upon the adopted line. How much work has been done on the bridges off of the line?"

On April 4, 1869, I wired Mr. Snyder from Washington as follows:

"I have been at work on finances, they are getting better. Keep good courage. Tell your banks and merchants we are going to see them through all right. We are just now trammelled by injustice, fights, &c. but are, nevertheless, able to take care of ourselves."

On April 4, 1869, I also wrote to Mr. J. E. House, my representative at Omaha, as follows:

Washington, D. C.

"I have just heard that the Special commissioners came over our road with no engineer with them to represent me or to even explain our maps and profiles. Such action is inexcusable, and can only be the result of carelessness or a want of appreciation of the importance of the case; that no one who has charge of matters in my absence can excuse <sup>this</sup> neglect. The town lot matter has been handled at Salt Lake scandalously and regardless of my orders. This neglect is likely to bring down on us a very harsh report for neglect as far as the examination of the road is concerned, and the loss of thousands of dollars so far as town lots are concerned, and I am totally out of patience with such management."

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On April 3, 1869, Mr. Snyder forwarded me the following letter from Mr. Schimonsky, who had been draughtsman and Assistant to Mr. S. B. Reed during the entire construction. It seemed that the thieving and demoralization extended to almost everyone in the Construction Department:

Echo, April 4, 1869.

"Your very kind letter's received, and I do thank you for them, the more that they prove that there are some men yet who befriend me.

I am afraid I will for the last few weeks I shall stay, have no time as we are closing, and have outside work for final report to make the plans for wall work previously done with estimates and bills and but fifty day's time.

The day of my railroad bliss or captivity are numbered-not that I complain for the past- I had very little to do; all my fretting came rather from the contrary direction seeing things done to tarnish the reputation of any engineer. Bridge after bridge bound to go down, carrying the loss of thousands and tens of thousands. Our abutments have often very often but a face, while in the back is carted loose gravel and stones. I did show Mr. Armstrong a good deal of it, so that by taking with a penknife a stone out, out came the filling of loose gravel. There is reason for your losses. Two miles from here the bank instead of being rip rap with stone is so with flat and box cars and will be on a steep grade, a reversed curve where a tangent at exactly the same cost could have been; the bank might have been 6 inches higher at an additional cost of \$2000. The land slides were a natural necessity; instead of 1 1-2 slope through clay we had a 1-4 slope. Our 4 1-2 ft. high side cuts have no sustaining walls or not even an engineer like slope, and God knows they could have been made at less cost. Is there nothing to fret? Whenever I made a plan was it not always entirely destroyed by some ignorant change or addition to show his superiority? All these things I was mentioning to you I did not for the old-womanish desire of complaint but to show you where you must necessarily suffer in working this road, as if some of these great evils should not be removed you will and must necessarily have disaster by all care. Also I dont blame the company which has paid for first class work-the money forthcoming promptly, and more than abundantly; but honestly speaking the fault lay in the employ of a man not adequate to the task. What Col. Seymour did I never found out-he never found one of the million real faults, but some of imagination--all he did was personal comfort and employ of humbugs and loafers. If the man Snow (Lawrence included) had really understood his business or pretended business, he might have found really something, not against the Company but against the constructing man, and if the Dr. had made last summer the change he did intend he might have saved hundreds of thousands of dollars in the past and may in the future.

Energy? I even deny this quality- the energy came in thundering telegrams and fear of being disgraced and dismissed. What crowds of engineers-none of experience, mostly none even of knowledge and almost all with an inquisitive bump. Think of Mark Seymour who could never even read a plan, but who paid tremendous sums, employing cabinet makers to make without necessary tools trifling and trinkets and playthings being booked as bridgemen. Think of the useless status alone!

Col. Seymour having got the lot our office is on from Bromley, claims this house as his own, preparing to build a two-story house with cupola in front (I made the plan and Mark is getting the timber and the refuse of bridge timber) A nice present made to himself by himself of about \$10,000; not that I should begrudge it if a man should benefit the company to the amount of \$800 I would overlook his pilfering of \$10,000 but I cant see whatever he did.

In regard to the car-brake, I thought it might be wise to delay it till I come to Omaha as by different trucks the construction must necessarily be modified not the principle.

You are tired to death) for all your kindness) by me and I close."

They all included Mr. Reed in this but that was a mistake. He had no outside interest as far as I could learn, he devoted his whole time to the construction of the road and while he was not as positive as he should have been in breaking down these combinations which were an influence around him, still he took no part in it and had no sympathy in it and he showed this very plainly in the last end of the work and in the settlement with the Company.

On April 4, 1869, I received a dispatch from Mr. Snyder that Boyle had lost four teams by the Indians. Four men were shot.

On April 5, 1869, I wrote the following letter to Horace White, Editor of the Chicago Tribune, on the completed road:

Washington, 1869.

"I did not like to telegraph you or write but Hall, Ayer & Co. were very large creditors of ours; we purchase immense amount of stores, but I had no idea they would take the course they did. I thought they understood the question fully and could explain, but I see now that I ought to have written you directly. Our case is just this; the 2nd section of act of July, 1866, provides both roads shall go on until tracks meet. The C.P. Co. endeavored through the corrupt influences of the Interior Dept. to get snap judgements by acceptance of maps, &c. then by advance issue of bonds to cover the ground to Ogden thinking this would stop us, but we knew the fraud was so base that it would not stand and the present administration overruled the action holding to the law; they then appealed to Congress and through our troubles in New York, our mismanagement and the outside abuse of our road as being poorly built, &c. they created a terrible howl. Now it is changing and they are likely to get their concern shown up. The special commission will, as they already have, report that our road is fully equal to theirs and even better, The issue of bonds in advance while the commissioners were out to determine the line and that question was an unheard of thing one million of them was stopped in the Treasury. The country demands a road-a good one, and to make us pull up our track and wait two or three months for the C.P. Co. to reach us is a base fraud that the country or no one else would stand. The Government has ample security can and does retain security to finally complete the road as it may direct. We have already put up about \$2,000,000 of bonds and they retain \$16,200 per mile from us, while no other road has been forced to put up a cent on their completed road though all the other Pacific Roads have been reported as fully incomplete as the U.P.R.R. The great point is shall the two roads go on until they meet and then connect or shall we stop until it suits the convenience of the other to come to us. Thanking you for your frank, kind letter."

On April 5, 1869, our track was one mile East of Bear River, where it joins Salt Lake. The grading was done from the East base of Promontory 20 miles, which we were pushing the track over in order to deliver timber to the large trestle crossing the ravine rising Promontory Point. All this must be done within the next thirty days for us to reach Monument Point before the Central Pacific. We were fifty miles from it and they about the same distance. We had a very heavy trestle over Promontory to build and I was satisfied that we would not be able to reach Monument

which I had concluded was where we would meet, and this was confirmed by this information. The bill before Congress which we were endeavoring to pass fixing the point for the two companies on the point to meet, the Central Pacific had offered an amendment in the House that it should be at Ogden, over which we had a strenuous fight and I succeeded in defeating it and on April 6th, 1869, I received the following from Glidden and Williams of Boston:

"Our Associated Press gives us but poor reports. Your item of the defeat of the Ogden amendment is very gratifying and we got it from no other source. I think the statement of Oakes Ames and others published today must help the Senate; it is a good statement. Wish our friends could have passed to a vote on our simple proposition for election and removal of office from N. Y. and left the fixing of meeting for a separate vote. Our U.P.R.R. friends will all be in New York on Thursday or Friday."

"We are having pretty rough times here-where it will end I cannot see. If the U.S. Court has no jurisdiction Judge Barnard will strip the company. I would not give much for what the company will have left after their affairs run through the hands of Fisk's crowd- who have all matters their own way at present."

On March 30, 1869, the Central Pacific were 30 miles West of Duff Creek and 60 miles from Monument Point. They laid 17 miles the last week, were delayed on account of material. They set apart the day before for a big day's work, but iron and ties came to lay 4 1-2 miles only a part of material went in ditch. Hurd and party came yesterday; Said he was going on an exploring expedition up the Truckee.

On April 6, 1869, Mr. Seymour wired me that the Central Pacific was 38 miles west of Monument Point; Union Pacific fifty miles East. They were being ruined for want of track material.

On April 6, 1869, Mr. Oliver Ames issued the following letters to Contractors:

Boston, April 6, 1869.

"The character of the work under the Ames and subsequent contracts with this company was to be first quality and everything was to be done required to make a first class road.

I understand that the masonry and its foundations on bridge work on Bitter Creek are unworthy of a first class road, that the bridges are placed on sharp curves, diverging from the location line, making it dangerous to run over them on high speed and that temporary work is being substituted for permanent. Let me say to you that such work cannot be accepted, and unless made first class as required by contract, the company will do it at once at your expense."

On the same date, Judge Blatsford of the United States Court, moved the Fisk suit into his court and it was stated that the Fisk crowd court in the State court would not recognize the judgment of Blacksford and on April 7th, I wired to Mr. Duff that if the State court would not recognize the decision of Blacksford's action, to take it up with the

1869

Administration or Congress. Mr. Snyder, on April 7th, sent me the following from his men at the end of the Central Pacific track:-

"Crocker, Supt., returned from the east yesterday. He told several that they would meet the U.P. at the Promontory; said that the U.P. would not be able to get the cuts open there before the C.P. would have their track there. They had laid 9 miles in the last 3 days.

Hurd returned from the West today. He said he had gone to the Truckee and back. Rose Reed, 20 miles from Duff Creek West, is to be the end of a division. Water is brought 8 miles in wooden pipes to that point. The pipe is coming, it is said, for 15 miles to put in at Monument Point. Duff Creek and Locomotive Springs can't be used, too salty.

April 9:- Four miles laid today. A man is here who claims to be a U.P. man by the name of Harvey; is sent by Seymour I think. He don't seem to have any favors shown to him here by this company. Brags a great heap on the U.P.

April 9: 12 M. Laid two miles today; more iron expected.

April 11: I have been here 14 days and 32 miles have been laid in that time. They had a collision, two engines and several cars used up yesterday.

Storwbridge, Supt. Construction said yesterday they would have to change their line from the Promontory to Ogden."

On April 7, Mr. Dillon wired me from New York to know when I could meet him in Omaha and Mr. John B. Alley wired me from New York that Feild, the Counsel for Fisk, says they shall disregard Blackford's decision, and they have issued subpoenas to appear before referee this morning. Barnes and himself had not yet done anything either way, but probably will today.

On April 8th, I wired Mr. Ames from Washington as follows:

"Telegraph to me immediately at Senate Telegraph office what Barnerd is doing incase. If he refuses to recognize Blackford's decision, I should know it at once."

On April 7th, Mr. Snyder forwarded me the following letter from his agent, Mr. Miller, who was at the end of the track:

"I arrived here this afternoon direct from Salt Lake City, where I have been stopping a few days at the request of Mr. Poppleton, who anticipated the commencement of legal proceedings on the part of the C.P.R.

Upon my arrival here I found Col. Seymour, at this hour 9 P.M. S. B. Reed and party have just returned from the front; they intend returning tomorrow and I have determined to go myself on the first coach tomorrow evening.

I met this evening a man by the name of Brown, a timber contractor who certainly has done well by his contract facilities, in as much as he is the possessor of a fast woman, horses, &c. and is generally loud. His case could not stand a very searching or honest investigation.

The railroad from Wasatch to Corinne is in a fearful condition and requires the utmost care for the construction trains to pass over it in safety. I understand upon inquiry that the same amount per mile is charged for this road in its present condition as though it were properly graded, ballasted and ironed, and it is a self evident fact that it will require as much money by two-thirds to put it in running order, should the Government commissioners deem fit to accept it.

I will mention here that our different head quarters of construction are adorned by gems of the fair sex; I am not aware that this item has any particular bearing upon construction, but merely notice the matter to show that our aforesaid heads have some time to devote to the fine arts.

I write tonight more to inform you of my movements than to impart

any particular intelligence, but tomorrow noon I will be in Corinne, which has already become a fast place, and where liquor is dispensed and punished to a fearful extent; I then hope to transmit to you information touching directly upon the subject of research."

I also received the following letter from Mr. Duff:

New York, April 7, 1869.

"I answered your telegram saying that Field, counsel for Fisk, had summoned Cisco and Durant before the referee to testify, and they refused to be sworn as they considered the case in the United States court. It is not known what Judge Barnard will do but the impression is that he will disregard it.

Dillon goes West tonight and I think it very important that you and Price should be with him, as he will want your advice and judgment about straightening out our affairs there. I hope you can go with him. I hope to go out to Omaha next week and get our land matters put into shape so that we can put them on the market at an early day. Have we got no friend in the State who will put our case as it is?

I think that we shall get our affairs in good condition here in a few days. Unfortunately the money market is worse than it has been since the road has been building, but we hope to have a change in a few days. Let me hear from you tomorrow."

On April 8, 1869, Mr. Snyder wired that President Stanford notified Bent forbidding him stirring any material within 200 feet of Central line on Promontory.

On April 8th, Dr. Geo. L. Miller, the Editor of the Omaha Herald wrote me from Omaha as follows:

"Am much obliged for your kind letter. Don't work yourself out down there.

I think, as you say, you have already got the enemy as good as down. Clements and Williamson had gone before your letter reached. Snyder has given you definite accounts of their ride over the road, and thinks you will be able to satisfy Williamson.

Snyder suggested a doubt about the publication of the Ames reply to Huntington and I am withholding it, since you said nothing about it, until I see signs of it East. It is to me as being a masterly answer. You wrote it, and you know you did."

"We had been doing all our printing in the East but Dr. Miller's paper the Herald had been sustaining us during all the time we were building the road. Dr. Miller was very active and aggressive in developing the country and a very able <sup>leading</sup> citizen of Nebraska, devoting his time to its interests and I had gotten an order from the company to turn over to him what printing was done at Omaha, which he was very grateful for. His paper was the leading paper West of the Missouri.

On April 10, 1869, I wired Mr. House to make no effort to build up any town on our line West of Bonneville.; I also wired to Mr. Dillon that we succeeded in passing the law through the Senate last night authorizing us to hold the election on the 22nd of April in Boston and to remove our office there. This was a great success and <sup>put</sup> us out of the hands of the New York Black-mailers and pirates.

On the same date I appointed Mr. William E. Chandler, who had been assisting me for a long time as our Attorney to look after our business in Washington, as I was going to leave for the West. I had made an agreement with Mr. Huntington on the point of the meeting of the tracks and we had agreed to have Congress pass a law fixing it at Promontory Summit, so as to settle all questions as to the delivery of bonds. I also agreed to sell our road to Central Pacific from Promontory to Ogden, for its actual cost to avoid their building a parallel line <sup>line</sup> to ours to Ogden. I was laboring under a great deal of difficulty in making this agreement from the fact that the Central Pacific lines had been accepted while our line was held in abeyance and it gave them the advantage of the issue of bonds upon their line, but the settlement was much better for us than to allow the fight to go on under the decision which had been made in the different departments before Grant had become President.

1869

On April 12th, I received the following letter from Mr. Ames:

North Easton, April 12, 1869.

"Your telegrams saying you would leave for the west Sunday night are received. The arrangement made to settle on point of Junction we have not yet learned definitely as we have yet only the rumors of the papers. Any settlement is better than a constant fight, but the information we yet have is not as favorable as we hoped. To give the Central Pacific the Junction at Ogden is giving all they claimed. They only paying us for our road to Promontory Point and probably not paying near as much as it has cost us.

The Committee chosen to go out on the road and take full charge of construction and everything else on the line and report at the earliest moment has not yet started. I have a telegram today from Dillon wanting a copy of resolution appointing the Committee with the full power of the Board. I will telegraph our Secretary in the morning to send it to him.

Our money matters are in a bad state and I fear before we get them running smoothly we shall have some more difficulty with our men on line of road, though I hope just as soon as we get our office and board removed to Boston to have things very much smoother.

I want you to take full charge of the engineering department and in order to finish up the road we must use the utmost economy in our finances. We will get things working here smoothly soon, and as soon as the road is opened we shall have such a flow of business as will at once give us credit smooth up the road so it will run well and before another winter sets in we should have our machine shops, snow-fences, water tanks and reservoirs all prepared, and we think we shall have enough rolling stock to answer all the demands upon it.

You will probably find Dillon at Omaha. Price was here Saturday and left for Washington Saturday night and will go out with you over the road if we can get home in time. I should not, however, delay my visit on account of delay of Mr. Price, as the presence of this committee on line of road is essential to its speedy completion and the restoration of confidence to its stockholders."

Mr. Ames enclosed in his letter copy of the following order to Seymour:

"You will please give to Gen. G. M. Dodge, Chief Engineer of this company, all the maps, profiles and contracts you may have relating to the engineering and construction of the road, together with such other

North Easton, April 12, 1869.

information as you may have of service to the Company, and report to this office either in New York or Boston, as you may be required."

Mr. Ames' letter reached me at Council Bluffs and on April  
1869  
19th I answered it as follows:

Council Bluffs, 1869.

"I am in receipt of your letter complaining of the agreement. I will state the case as plainly as I can and you must be the judge.

1st. C. P. Bonds at rate of \$13,500 per mile were issued and delivered to and received for by C.P.R.R. to Ogden.

2nd. Our Attorneys concluded that we would be unable to break up that issue, or if it was broken, it must be in court as last resort. U.S. Supreme court.

3rd. The cabinet concluded that it would be impossible to revoke it without legislation, which you are aware it was impossible to get, and advised a compromise, especially when we ascertained that we could not reach Monument Point first.

4th. They also were of the opinion that it would be impossible to issue bonds to us over the same country until the other issue was legally nullified.

5th. On the decision and record as made by the Secretary of the Interior and Treasury the C. P. Co. had clear right to stop our crossing their grading, whenever we reached it and were prepared to do so. See Poppleton's letter that Hazard has.

6th. We could get no order for examination of our road beyond Ogden, while the law places examination of C. P. entirely in the hands of the Surveyor General of California and Gen. Cox informed me he could not interfere as the law made it imperative, the only remedy was to refuse to issue bonds on their report on ground of uncompleted road.

Now, if under this state of affairs you can see where you were to get any pay for work west of Ogden, I cannot. You could have fought them as long as you pleased, but instead of compromising now you would finally have been forced to make your junction where the C.P.R.R. intersected you at Ogden. It is even impossible for us to reach Promontory Summit by the time C.P.dees, 1083 miles west of Omaha.

8th. The agreement enabled us to get the law and the C.P.Co. have now no right beyond Promontory Summit until they pay us the cost of our work up to the common terminus; they cannot draw the bonds on it. We have to have road accepted to Promontory Summit and draw bonds therefore. The agreement so far as it conflicts with the law in this case is subordinate to it.

9th. Under the law you have the right to issue 1st mortgage bonds 190 miles in advance, your 1st mortgage bonds hold as far as your completed road, nothing in law or agreement takes off that lien, therefore all you could possibly get is the \$32000 per mile of government bonds, and if you would rather have them at some future time when your road is completed as required in the report of the Commissioners, or whether you prefer cash for your work done as soon as you turn it over to C.P. is a matter for you to decide. If the C.P.Co. do not choose to pay you for the road when you can hold it until they do, and they have no right, title or claim to it. They must pay for before they can use or hold it. On all these points relative to the issue of bonds and rights of parties I have the written opinions of Cushing and Chandler and am confident what the decisions of the Secetary of the Interior and Cabinet will be.

I made the best arrangement I could, it was that or nothing. I submitted it to Oakes Ames and informed him that it could be disagreed to before 12 o'clock the next day, but I do not believe that there is a man in the board who, had he been present and known all the circumstances, but would have agreed to it, and would consider it a good bargain. I expect all who knew nothing of the circumstances would find fault with it. The great mistake you all labor under is the supposition that you were to override all the acts of the past administration, revoke what they had done and get a double issue of Bonds over the same ground, none of which would have done, as our lawyers told us the legal question was a prima facie case against us and we had to show fraud on it to break it up.

The bonds were issued and received for by the C.P.Co. gave them the legal title to them and how were you to get around it?

The cost of grading at 50 cents and rock at \$4.50 I am told

by the men in charge out there, is ample to cover it all, our contract price is much less."

= Race of R. Roads =

The contest between the Union Pacific and Central Pacific over the country from Humboldt Wells to Echo Canon was a very drastic and aggressive one. Both companies, with all the influence they could bring to bear were aggressively at work to influence the administration and Congress. The fight for the Union Pacific fell almost entirely upon me and I had with me as Attorney, Mr. W. E. Chandler, Mr. Caleb Cushing and Mr. Montgomery Blair in Washington. Mr. Durant's continual attacks upon our lines and upon the Government's operation had greatly prejudiced the Interior Department and the Administration against the Union Pacific. The efforts all the time of Durant to change our lines, increase our grades, to cheapen work, &c. gave the sympathy of the country to the other road; it also brought against him the Government Director Mr. J. L. Williams, a very competent Civil Engineer who had great influence; it had also greatly prejudiced General Grant, Sherman and the Army so that the action of Mr. Everett and the Interior Department in accepting the line of the Central Pacific to the head of Echo was a great blow to us. No one appreciated this more than I did and as the records show, no one fought it more than we did, but it was hard to overcome; then the drawing of \$13,500 per mile of Government bonds under the law, ahead of their work and line, covered the line nearly to Ogden. They were entitled to \$32000 per mile, but we stopped the balance of it when General Grant became President. Then again, the Union Pacific was handicapped by the fight in New York of Fisk where it tied up its elections, stopped them from electing the new Board of Directors and holding stock-holders' meetings, and tying us up generally so that it took the individual efforts and the individual checks of the Directors to keep the construction going and the road operating. I borrowed money every place I could, individually, so did all the others. We borrowed from banks in Iowa, Nebraska and Utah. The Central Pacific Company had actively the Western Senators and they were very potent, while our Eastern people did not seem to have the support which they should have had from their own Senators. I had behind me the Iowa and Illinois Senators and the members of Congress, and the Iowa delegation was a very strong one, with James F. Wilson in the House

and Harlan in the Senate. We were successful in everything except in stopping this issue of \$13,600 of bonds and the acceptance of the line. I saw at the last end of the Congressional fight that unless we came to an agreement upon a point of meeting, that the Central Pacific would build into Ogden and upon their line would receive the bonds while we would build from there to Promontory Point or beyond and it would be a great question whether we would ever receive any bonds from the Government.

Then again, I appreciated the fact that the natural point of meeting was at Ogden where the branch line would come in from Salt Lake, and it was foolish to suppose that the Central Pacific would not come to that point, no matter what the result of our fight in Congress or where we built. Mr. Huntington, who, while he was fighting with all his power on the Central Pacific side, was a personal friend of mine and we discussed the matter very fully before we went into an agreement. We both concluded that it was better for both companies, as they were to be run as one continuous line, to come to an agreement ourselves before being forced to it by Congress. We therefore agreed on the point and placed that agreement before Congress to make it a law and definitely stated what each side stood for. The Union Pacific got full pay and a good deal more for all their work from Ogden West and the Central Pacific got the bonds upon their line to Ogden, and the Union Pacific had the right to issue \$32000 per mile of their first mortgage bonds for the 100 miles of work they had done beyond Ogden, so that the Central Pacific had to pay for two roads from Humboldt Wells to Ogden. At first our people were not satisfied with the agreement, but when they came to get at all the facts and received my letter to Mr. Ames, they all congratulated me upon having so successfully ended the dispute between the company.

On April 13th, <sup>1869</sup> Mr. William E. Chandler wrote me as follows:

Washington, D. C.

"I called on Judge Dent and offered him the retainer as requested by you. He didn't seem satisfied and asked me to talk with Paige, his partner. Paige said they preferred some arrangement for a yearly fee- say \$500 to \$1000 per month-that they had just been offered \$1000 to fight us, &c. have no idea of taking \$500 as a retainer, which would keep them still, &c. but must have a yearly arrangement. The Judge said that Gen. Rawlins had said to him that he would be retained by

the U.P.R.R. and he had been expecting a very liberal proposition. I talked prudently and discreetly with them, but they declined retainer and await propositions for a definite arrangement.

I communicated results to Mr. Ames and he said, "Let them go- we will not pay such a sum." I suggested that perhaps we had better submit to it until our bonds were all delivered, but he said, "No" and so I let it drop. I shall tell Judge D. that the Company is in a transition state and that I do not get any definite answer. I suppose they mean to get not less than \$6000 out of it if they get anything. Judge D. is a clever, well-meaning man, but he has got into the hands of Paige, who is a smart, sharp money-making men.

Yesterday morning the Cabinet considered the subject of the new Commissioners and will probably appoint them shortly. I saw Gov. Cox a moment yesterday, and will see him and Gen. Rawlins again this morning and give them our names.

I sent you Gen. Cushing's and my opinion yesterday by mail. Nothing else new. The office seekers are getting terribly disappointed as the appointments come off."

Congress had authorized the appointment of another Commission to determine how much money should be expended to complete them as to examine the Union Pacific roads. There was talk of moving our first-class railroads offices from Omaha to Council Bluffs, Iowa, but on April 14th, I received a dispatch from Mr. Ames not to have them removed until advised from there. This removal was for the purpose of avoiding suites.

On April 16th, 1869, Mr. Chandler wrote me that the Government was awaiting the Blickensderfer and Warren report, when the new commission would be immediately appointed.

On April 17, 1869, Mr. Morris wrote me as follows from Promontory:

"I was anxious before answering your question about the grade at Green River-on the location made by yourself, to hear from a reliable source the grades used east of there, also some additional facts as to the manner in which the road was constructed; how well the track was surfaced and whether the settling of the large embankments had not very materially increased the grade used in locating. I am now satisfied the location is the best and true engineering one-assuming that the location for 150 miles east of that point is the correct one-because I consider the ruling grade of the 150 miles east of Green River to be the grade which controls the grade used in crossing the Divide between Green River and Black's Fork. If all the grades east of Quaking Asp (excepting the Black Hills) could have been made 53 ft. per mile I then should have used a 90 or 100 ft. grade there and a helping engine.

I had thought until I saw Mr. House that you were fully informed as to the work here and the line which this company were building in all its details. The line which is being built up to the big fill (station 3030 is the line located by you- 80 ft. to mile and 6 curves) except in one place, near station 2730, here the line was thrown in by increasing the curvature to avoid long swamp; change was to add 30 curvature in one degree curve and 220 ft. in distance. At the big fill the alignment has been bettered by throwing a tangent across the gulch in place of turning in as was the original location. The embankment has been very much increased; this is being filled by trestle work. The alteration also made the rock cut lighter. There are two 8 curves at either end of tangent which can be reduced to 6 by taking off a little more rock all of which can be used in the fill. At station 3053 a 10 curve is used which runs around the point there and leaves very little of the big rock cut and allows the 6 curve to lay further up the hill, decreasing the long fill but increasing the distance".

On April 21st, Mr. Snyder wired me that the Central Pacific was within 18 miles of the summit of Promontory Point. We were within 12 miles. Mr. Dillon was at Promontory.

On April 22nd, Mr. Dillon wired me as follows:

Echo, Apr 21, 1869.

"I saw Getland and Stanford. Their line over Promontory Point is nearly done. They want us to stop and lay a track on their line. It will take us until the 10th or 16th of July to finish our grading. What do you think of it, will it interfere with our settling with them?

I answered this telegram as follows:

"I consider it would interfere greatly with our settlement and would advise you not to do so. Duff is here and agrees with me."

On April 22nd, Mr. Snyder wrote me from Omaha as follows:

"Your dispatch received. I judge that Seymour and Reed have gotten hold of Dillon and are making the most of it. He takes their work for various matters without examining for himself and is telegraphing me to do various things which I know are not right, and which he would not do if S. and R. were not writing dispatches for him.

I wish you could go out and look through the outfit. It ought to be done quickly or there will be nothing left. If T.C.D. comes here with any authority, I propose to quit at once."

On April 23rd, Mr. Dillon wrote me from Wahsatch as follows:

"We have 11 miles track to lay yet. I think the work will be ready for track except Carmichael's cut 2 1-2 miles from end of track; that will take until 10th of May. We are working it night and day with all the power we can put on. I am going over work at head of Echo today with Mr. Reed; will report to you this evening."

On April 24th, Mr. Seymour wired me from Brigham City as follows:

"If both companies agree, will Government agree that Central line be adopted on east slope instead of ours?"

To this I answered:

Mo. Bluffs, April 24, 1869.

"Government will agree to nothing; they say they shall be governed and act in the matter on the report of the Special commissioner now in Washington making their report."

On the same date, April 24, Mr. Chandler received the following dispatch from me:

Co. Bluffs, April 24, 1869.

"C.P. get their road examined as fast as laid. Commission have examined and accepted it to Monument Point. Our Commissioners should be instructed to examine ours and put us on same footing. I leave for end of track tonight. What did Commissioner of General Land office do?"

At the request of Mr. Blickensderfer, I sent him the quantities on the line from Ogden to Promontory Point as follows:-

Council Bluffs, Iowa, Apr. 24, 1869.

"I give you the approximate estimates from station to station as you ask it in your telegram of April 23rd. It differs from the one sent before as in looking it over, I discovered a mistake in rock and in embankment, but does not differ materially except in rock. This is on the line originally located and does not allow for the saving made by Morris over East slope of Promontory in embankment, which, I remember rightly was about 100,000 yards. Now in the amount saved in the change of line from Surprise Creek to Terrace Pass, I should say the total saving was nearly 300,000 yards in the two changes but you are as good a judge of this as I am.

Sta.	Earth Exva.	Rock Exca.	Earth Embt.
480. to 2742	35,145		879,866.
" 2742 " 4598	136,519	90,246	875,667.
" 4598 " 5932	101,321	15,494	355,114.
" 5932 " 8365	83,391		844,217
" 8365 " 10240	38,508	11,000	679,879.
" 10240 " 11215	37,950		368,443.
" 11215 " 12308	60,603		525,238

On the same date, April 24th,<sup>1869</sup> I wrote Mr. Ames in relation to the bridges that were being put in by Boomer to take the place of out temporary bridges:

Council Bluffs, Iowa, Apr. 24, 1869.

"Mr. Boomer has filed with me a written protest refusing to put any more Bridges up upon our Masonry. Three of his bridges have gone down the masonry failing to support their weight only no cars having run over them. Two others are giving way, and as far as I can learn, the masonry being now put in by Warner and Whitman is very little better than that put in on Bitter Creek. Of this I cannot speak certainly. I however, have notified all except them that I would receive nothing for the company that did not fully come up to first class work; this, of course, will do no good as they are all to work for the contractors and I entered just as strong a protest as I knew how last October against all the work being done on Bitter Creek and before much of it had been commenced, knowing the result that must certainly follow. The arches of two of the culverts on Lodge Pole gave way this winter from inferior work. Though closely watched it seems we cannot trust masons who have had the reputation of being No. 1 and honest, unless we employ an engineer to every structure to stand right over them while they put in a drain that will hardly cost as much as the engineer's salary, all the rest of work on Lodge Pole, the work on Cheyenne shops and on Laramie shops, they report as standing very well!"

We were receiving a great many inquiries about the road, one of which came from James Dredge of London, and which I answered as follows, showing the nature of the inquiries and our answers to them:

Council Bluffs, April 24, 1869.

"I will try to find some of our publications which set forth the financial value of road. The data relating to its location and construction you have in reports of 1866 and 1867 and will send report for 1868 as soon as published.

The two roads are today only 26 miles apart, will form a junction at Promontory Summit, 1083 miles west of Missouri River and 672 East of Sacramento in about two weeks. Soon after connection

they will be ready for through travel, and the time mentioned by you, July 4, you can travel as fast, as safely and comfortably over the Pacific Roads as over the best of our American Railroads. Our cars are the best manufactured, with Pullman Palace Sleeping cars attached to all night trains. Indians and revolvers exist only in imagination; here we hear nothing of it. A passenger was never harmed either that I am aware of and the daily travel now over our roads as far as completed is very large. Should you or any of your friends come this way, I should be glad to show them any courtesy or give them any assistance that will aid them in their journey.

Can you recommend to me any modern works upon the bridges of Europe? I am building a bridge at this place over the Missouri River connecting the U.P.R.R. with its eastern connections. We go down 70 to 75 ft. below low water ~~for~~ <sup>869</sup> foundations and any work descriptive of bridges with deep foundations would be of value to me."

On April 24th, I received a dispatch from Glidden and Williams of Boston, saying,

"Please hurry Duff and Dillon back and all Government directors yourself with them so that we can have an election. We are not safe until we do."

On April 24th, I received the following from Mr. Snyder on the Indian troubles:

Omaha, April 24, 1869.

"Indian news looks very bad; the devils are all along our line, Pine Bluffs to Willow Island and mean to give us trouble. They steal stock daily and murder whenever they can. All the plains, men say that we will have more trouble than ever. The peaceable Indians are coming in to Ft. Platte as they say to be safe from those on the war path and to demonstrate their good intentions.

Enclosed from Bent explains itself. It will hurt us on the grade. Gen. Sherman is expected here tomorrow, and I shall make strong efforts to have force of Pawnees put in service to patrol the road!"

On April 25th, Mr. W. E. Chandler wrote me from Washington as follows:

Your letters of 16th and 17th inst. and telegram of the 24th are before me.

Huntington, in reply to a telegram from me, said it must be a mistake about their working east of Promontory summit, that he would telegraph and stop it if such was the fact.

1st. Warren and the other Commissioners will probably be through their report in a week from this time. They will probably all agree upon a line, substantially - I think the line built upon by both roads with some variations, which may not require serious action by the Government. The report will not hurt us so far as past controversies are concerned, neither do I think it will whitewash the Central Pacific road; of course, we want to be vindicated. At the same time I think it would be best that all the Commissioners should agree upon the whole report if possible.

2nd. As I telegraphed, I think I shall get tomorrow or next day instructions issued to the Commissioners to examine our completed sections, and have Morris go out, get Wilson and proceed to the end of the track. If Warren is delayed here too long, he will draw a report from the 1000th to the 1040th mile - send it out, Wilson and Morris can sign and return it here, so that it may be placed on file before Warren makes his examination of the balance of the road.

3d. I have been delayed in getting the lands withdrawn. They should be withdrawn upon our definite location from the 1000th mile to Promontory Point, as we do not wish the map of October 20th to be recognized east of that point; but the question of line causes the delay. I told Secretary Cox yesterday that somehow or other prior to the 4th of March the Central Pacific could get anything it wanted and the

Union Pacific nothing it wanted at the Interior Department.

4th. The new Commissioners were selected Friday but it was solemnly agreed to conceal from all of us their names until they accepted. I shall try and find out tomorrow who they are. I have no doubt they are good men, and I trust some of the names we suggested are among the number; although the Cabinet probably had friends whom they wished to honor by appointment on the Commission.

In other matters I know little more than you do. The Central Pacific are anxious to get some bonds, and Mr. Ames is anxious to get land patents and also bonds. The Administration is earnestly desirous of helping us and appreciates our situation but will move cautiously. We shall press for lands and bonds immediately and just as earnestly as we can without doing our cause more harm than good.

You will learn all that is done about the organization of the Company quite as soon as I shall learn it, although Mr. Oakes Ames is to be here this week, and I will write you if I have any peculiar opinions or facts to communicate.

As fast as the sections are completed beyond the 1040th mile toward Promontory summit you had better telegraph so that we may ask for instructions to the Commissioners to examine the completed sections."

On April 28th, 1869, Mr. Shanlder, our Attorney, wrote to Mr. Oliver Ames as follows:

Washington, April 28, 1869.

"At the Interior Department this morning, I saw your letter of the 26th relative to your affidavits on the completed section of the road. Please keep me informed of your communications with the Department. There has been an unfriendly influence against us somewhere in the Interior Department, and a wrong answer to a letter might get prepared by a clerk and signed by the Secretary and sent forward which it would be hard to undo. The Secretary had handed this letter to Mr. Bloss saying it would be unnecessary to answer it.

My opinion is that without asking the Secretary how he would like the affidavits made, which he may not inform you, you should go on, as suggested in my last letter, and forward your affidavits as fast as you can—that road has been constructed in sections beyond the 1040th mile, with the request that the Commissioners shall be instructed to examine it. We shall then get the instructions issued without any questions raised as to whether we or the Central are to be treated as the owners of Promontory Point. If we raise that question for discussion, there will be delay which is what we wish to avoid.

1st. Today the Secretary of the Interior has decided to issue the instructions, to the Commissioners, to examine the completed sections of our road, and M. Morris will go out at once to proceed with Mr. Wilson to the examination. Gen. Warren will join as soon as he can get away from here.

2nd. The Secretary has also decided to withdraw the lands through Utah upon our definite location to Promontory summit. We have been delayed because he wished the Commissioners to inform him if the line actually built is upon the definite location. As the Commissioners will so inform him, I think we shall get the lands withdrawn tomorrow.

3rd. The new Commissioners are accepting their appointments. I cannot learn who they are. Horace Greeley declined and named some one S. M. Falton accepted. I suppose by some unfair manner I could ascertain who they are, but the exigency does not call for such action and I have no doubt it will be a good Commission.

4th. The Commissioners now here preparing their report; are nearly through with their figuring and estimating and within a day or two will make an effort to agree upon a report. That report is to cover two questions—1st. What is the best line over the disputed territory? 2nd. What is necessary to make the Central a first class road?

On the first point they will substantially agree, and I think the report will substantially vindicate our past claims. On the 2nd

point they will probably differ somewhat, but they may agree on this by making mutual concessions. I do not suppose their report will be fully made, and signed for ten days yet."

We who were in the West were fearful that Mr. Durant would undertake to use his authority as Vice President although he had been refused all powers. We wished that Mr. Oliver Ames could come out to be present at the joining of the tracks and on April 28th, in answer to our dispatches, Mr. Ames answered as follows:

Boston, April 28, 1869.

"Must remain here on money matters. You have full power of Board; exercise your authority. Sidney Bartlett says while I am on hand at the Company's headquarters here, the Vice President has no power to act as President."

On April 29th, <sup>1869</sup> I wired Mr. Ames from Promontory as follows:

"Instruct New York to pay no draft nor authorize any person to draw on contractor's account unless authorized by letter."

I sent this dispatch at the request of the committee in charge of construction to prevent any drafts being drawn by Durant or any one else to pay contractors.

On April 29th, Mr. Ames answered that the message was received and was being attended to.

On April 29th, Mr. Ames wired Messrs. Duff, Dillon and Price as follows:

Boston, April 29, 1869.

"You will make no permanent arrangements for connection. Change cars only at end of the track laid by us-till they pay us; otherwise shall find it difficult making settlement with them. Get matters in best shape you can. Come home soon, and let the new Board authorize future arrangements"

Mr. Oliver Ames

On April 29th, Mr. W. E. Chandler wrote me from Washington as follows:

"The Secretary of the Interior yesterday directed the withdrawal of the lands in Utah from the 900th mile post to Promontory summit upon the line of our definite location. I will forward by mail copies of his letters to the Commissioners of the General Land Office.

Yesterday the Secretary informed me that he would immediately issue instructions to the Commissioners to examine the completed sections of our road. Today the Secretary having gone to Mount Vernon, the Asst. Secretary informs me that it is decided to send out the Commissioners only upon receiving your affidavit of the completed sections to Promontory Point. I do not know whether the Secretary will adhere to this decision. There is certainly an unfriendly influence at the Interior Department and we must find out what it is, I only know that it is not with the Secretary, who is very friendly, very prompt and anxious to do all in his power to promote the construction of the road and the financial interests of the companies so far as he may properly do so.

If the road reaches Promontory summit within a day or so, and you learn that fact by telegraph from the end of the track and forward

your affidavit at once, the instructions will reach the commissioners about as quickly and they will reach the ground about as soon as if partial instructions are issued. I trust therefore you will send the affidavits as soon as possible and inform me.

Nothing new about the Commissioners. Gen. Hiram Walbridge is probably one of them."

This was an approval of the Interior Department of our location from Ogden to Promontory Point, which we had been contending for and which the Central Pacific also contended for.

<sup>1869</sup>  
On April 29th, Mr. Williams, the Treasurer of the Company wrote me as follows from Boston:

"Have seen your letters and telegrams to Oliver Ames. He has sent out some good telegrams yesterday and today to Duff, Dillon and Price and some to you. He is disposed to take more responsibility than in N.Y. as you will have noticed in those messages.

Sidney Bartlett, our ablest lawyer, says it is a mistaken idea that our by-law gives any power to the V. P.; when the President is attending to his duties, that his coming to the office each day, of the company gives him full power everywhere, and the V.P. cannot rightly exercise the power of the President. Mr. Ames so telegraphed Duff, Dillon and Price, that they had all the power and must exercise it, which I hope they do not fail to do.

Mr. Ames directed them today not to make any permanent connection with the C.P., but his telegrams of yesterday and today are so good I will copy them. They have the right ring of authority. I am anxious to hear their effect on your Commissioners, &c.

(The two telegrams from Mr. Oliver Ames copied before.)

Are not these first rate? Now if Commissioners will only exercise their authority all will go well. I feel anxious about this matter of connection; think the C.P.R.R. will claim to come to Ogden or near there at once, but I hope it will not be consented to till they pay. If we take this ground they will be as anxious as we for the Govt bonds and a settlement with us, but if they are allowed to come to Ogden, we may whistle for years for a settlement. This is the more important as there appears to be so much doubt about the meaning of the agreement made at Hoppers, and the law-both so weak in their provisions and open to all sorts of criticisms and objections.

for W.T.G. Ct., telegraphed Dillon and Duff to authorize drafts on him \$200,000 and )President. today directs C.S.B. not to pay drafts unless authorized by Duff and Dillon."

At the request of our Company, the President appointed a new commission to determine how much money the company had spent since the examination by the Blickensderfer commission so that we could draw bonds which had been held by the Treasury Department to insure the completed road, which had been accepted up to the specifications.

On April 29, Mr. Ames wrote me from Boston as follows:

"Have instructed New York to pay no drafts not authorized by Duff and Dillon. Say to Buff that he will want all his sagacity about him to not be circumvented by Central Road in any arrangement they may propose about running road. I would make no delivery of road until we get our pay- they will come it over us if we do.

I have sent to Mr. Bushnell tonight power signed by Bates and self giving Duff and Dillon full power of Board of Trustees on lines, and he is to forward it immediately. We hope if you can fix up the road so as to run it at reasonable cost to give you money enough to finish it up."

On April 30, 1869, our track was eighteen miles West of Ogden and the road all clear.

<sup>1869</sup> On May 1st, Mr. Dillon wired to Mr. Oliver Ames from Morgan City;

"If injunction does not prevent, have all maps, profiles and papers in engineer's office up stairs in New York, boxed and sent to Boston!"

This was for the purpose of getting them in our possession and away from New York and the pirates there.

Mr. Ames wired to Duff and Dillon on the first to draw no more drafts on New York. Telegraphed you authority to draw on Glidden for \$200,000 on the 28th of April.

On May 1st, Mr. Sidney Dillon wired to W. J. Glidden:

"We must have \$500,000 to pay contractors' men immediately or road cannot run. When will Oliver Ames be here?"

On May 2nd, Mr. Ames wrote me from North Easton as follows:

"Yours of April 19th is at hand, for which I am much obliged. I am sorry to hear that your masonry and bridging is in such bad order. Is there no way to hold the contractors responsible for their rascality? I hear that Evans is to blame for much of it. Dont have any of these contractors settled with who are in fault if there is any possibility of reclamation. You now have the Committee out there with you, and with all your experience and knowledge there will be no need of advice from me."

I wish you would write to the President and Cox to keep back the 5 commissioners until you have the road ready for them. We are doing all we can to raise money to meet our payments and your drafts. We have paid a large amount of the debt here and any amount of your drafts. I should think you ought to get a large amount of money from the earnings of the road, enough to pay what you require out there, after paying what drafts we have now authorized you to draw. Do you know these new commissioners appointed by the President? You must see that they are well taken care of and they must make a good report for the road. You will go with them, of course, and educate them up to it.

We have taken down our sign in New York and given up the offices. Injunctions were served on all the Banks where Bushnell, Crane and Baker had their accounts, on Friday to try to set funds of the railroad, but we were too sharp for them. Bushnell was advised by one of Fisk's men who had been watching us for weeks, that the injunctions were to be served, and so he was prepared for them. He said Fisk would not pay as he agreed to and he offers to work for Bushnell. When we can get our books away from New York and cleaned out from that sink of corruption, we shall feel safe and not until then. Give my regards to Mrs D."

On May 4th, I wrote from Piedmont to Mr. S. Dillon as follows:

"The contractors who put in masonry on Sulphur Creek should not be paid. The abutments of five bridges are breaking and tumbling down. The Masonry on Bear River is worthless, the backing is dirt and free stone set on edge, and I doubt if there is a bond in any one of the piers. They are now delivering red sand stone there to put a course on top to cover their miserable work. I do not believe the masonry will hold up a truss and the placing of heavy sand stone on the piers will only help crush them. I should put truss on trestles and rebuild the entire work."

On May 16th, I wired Mr. Ames that the track would be joined on the 10th.

1869

On May 6th, Mr. Chandler wrote me from Washington as follows:

"Mr. Everts, Mr. Cushing and myself on behalf of your road, and Mr. Huntington and Mr. Crittenden on behalf of the Central today had an interview with the Secretaries of the Treasury and Interior, in which we urged giving the roads more lands. The interview was lengthy and very agreeable. They will give us Government bonds, requiring first mortgage bonds as security, although they do not positively promise us anything. In the event of their giving us the Government bonds, they will postpone sending out the new Commission of five "eminent citizens" until a later period.

It is evident that it is of no use to ask anything until Gen. Warren and the others make their report-on which they are busily engaged, and which may be finished in a week or ten days and which by reason of difference of opinion may not be finished for twice that time. We cannot get more Government bonds until this report is made, and we cannot examine our completed sections without Gen. Warren. If you think it best to ask the appointment of a new Commissioner in Gen. Warren's place, please write or telegraph me. I am not certain that it would result in getting us bonds any quicker, but it would be more gratifying to have our preliminary acceptance without being behind the California Company in this particular.

The Commissioners do not agree in all things. Mr. Blickenderfer is very stiff; adheres to his own views as to what would constitute a first class road, and I anticipate some difficulty in the commissioners arriving at a unanimous report; still this is possible. Mr. Chittenden and I confer with the commissioners and make such suggestions as we think will be useful, but the delay is very annoying.

Today I learn that Blickensderfer is inclined to moderate his views somewhat as to that standard of a first class road in order to get to an agreement, but Warren is more extreme than ever, demands a ridiculously high standard and has exaggerated opinions as to the immediate thorough business of the road. Warren's stiffness surprises me. Can he possibly be hostile to the road? Does he for any reason want to be conciliated? It is important to both roads (as we may get bonds on the report) to have it all right and favorable. We are to have a conference with the Commissioners tomorrow, but Warren acts strangely.

I have nothing of any consequence from Boston; nothing seems to have been done in the way of organization and I feel like a soldier without a captain. I want a little more money to close up my bills and to complete my own fee for the Congressional services. After a while they will be an old story and will not be appreciated, but if I should send to Mr. Ames for it he would not respond. Logan must not be forgotten and a pleasant letter from you to him telling how the road gets on and asking him to come out and see it would be appropriate.

Yesterday we told Chittenden and Huntington the substance of Cushing and my opinion in which Mr. Everts said he concurred. They did not particularly object to it but said they had been expecting you and Gen. Stanford to agree upon the town site and the cut of the road, and to make a settlement; but I think they will let us draw the bonds and account for them.

We don't seem to make out from any telegrams when the roads will unite. Warren says today that he feels confident of getting away in 10 days. Blickensderfer is inclined to give the Central location west of Monument Point, the Devil. This is pleasant but not useful to us. It will do us no particular good to name the Central."

On May 6th, when Durant and Duff were coming west to attend the joining of the tracks, at the tie siding at Piedmont, the Davis outfit captured their car and held them, refusing to let them go until they were paid for the estimates they had made on their contracts. There is no doubt this was an arrangement made by Durant for the purpose of forcing the Company to pay. It was a dispute between Davis and Co. and Reed, the Superintendent of Construction upon the amount due and he had

refused to accept a great deal of the timber and ties they had brought in. I was in Salt Lake at the time and immediately wired the commanding officer at Ft. Bridger to put a company on the train which I had arranged for at Green River to go to Piedmont and take possession of the car and the crowd that was there. My dispatch was taken off of the wires by the operator at Piedmont, who was with Davis, and Davis and the crowd went aboard the car and said if the soldiers were stopped there the men were so indignant and determined that their lives would not be safe. I did not hear of this myself, but they appealed to Sidney Dillon and he ordered the train, with the company aboard, to go through without stopping, which was a great mistake, but I did not hear of it until it was too late to stop it. There was nothing left to do now but to furnish money to pay off these contractors to release Duff. I knew Durant would be released any time he wanted to.

During May, the Company had already sent out over one million dollars to pay off contractors and especially to pay off the employees of the road who had been without pay since the first of January. Mr. Dillon appealed to me and on May 7th, from Echo, I wired to Oliver Ames as follows:

"Tie outfit at Piedmont. Hold Duff and Durant under guard as hostage for payment of amount due them. You must furnish funds on Dillon's call."

<sup>1869</sup>  
On April 8th I wired to Mr. Ames of Boston as follows:

Echo, May 8, 1869.

"The trouble at Piedmont is going to give us trouble in the running Department unless Snyder gets help immediately. If we wait until they begin to tie up trains, it will be too late to relieve them, will force us to pay entire road, now half million; will let us run smoothly until we can turn. The action at Piedmont has gone over the entire line. All know we had to pay before we could get released. Answer Omaha care of Snyder."

On May 9th, from Promontory I wired Mr. Ames that end of Union Pacific railroad was 1085 miles and 4680 feet; and also said to him:

"You can make affidavits of completed Union Pacific railroad to Promontory summit."

On May 9th Mr. W.E. Chandler wrote me from Washington as follows

"Yours of May 3d arrived yesterday simultaneously with the telegraphic information of the junction of the two roads, which ~~thrill~~ ed through the country yesterday. It is a grand result and public sentiment is rapidly changing in favor of doing justice to the men who have perilled their fortunes in this great national work."

I am glad you got along so pleasantly with the Central Pacific people. We are getting on with them in equal harmony here.

1st. We are still delayed in getting the order for the withdrawal of the lands, because our maps of definite locations do not show the meridian lines. Gen. Warren is trying to supply this deficiency, and I think we shall get the order of withdrawal some time this week.

2nd. I have been to Philadelphia two or three days, and have nothing new to report relative to the Commissioners. I wrote you that Warren was inclined to be severe upon the roads, and that Blickensdorfer was inclined to be reasonable. I shall be able to write tomorrow how they have progressed within the last four days.

3rd. The Commission of "Eminent citizens" will delay as I wrote you. The organization of your road is not yet made, and I feel in the same "unauthorized" condition that I have since you went away; however, there is nothing specially important pending. I hope you will be able to return East to secure a good organization of the road with your own friends in power and control so that hereafter the business of the road may be done promptly and to your satisfaction."

This placed us with funds so that we could commence settling with our contractors on fair terms.

On May 10th, Duff, Dillon, Durant and myself sent the following dispatch to Mr. Ames from Promontory:

"The last rail was laid today connecting the Union Pacific with the Central Pacific at Promontory Point. This act quietly performed 2500 miles west of Boston, 690 miles east of Sacramento will have an influence upon the future and upon the commerce and travel of the world that no one can today estimate. We congratulate you upon the success of the enterprise."

<sup>1869</sup>  
On May 10th Mr. Ames wrote me as follows:

North Easton, May 10, 1869.

"Let us rejoice that the last rail is laid and we have a road complete as far as engineering and grading and all the exciting contest for length of line is concerned. It is the great event of the age in railroad construction. The question now with us is how shall we put the road in the best running order and our finances in satisfactory shape? We have used up all our securities except a few that Duff has and these we can't get. We could give \$300,000 more if Mr. Duff would let us have the \$200,000 of 1st mortgage bonds he has. I have loaned the Company every 1st Mortgage I have after buying them of the company and putting up my money on them. We are doing everything we can but it is impossible for us to raise money without securities.

Your letter of May 3rd from Wahsatch was received today. This great overstock of material we have, on which we have wasted our money which would now help us out at once, was ordered against my opinion by Durant with the consent partly of Committee. I think Snyder has done very wrong to let Frost order so extravagantly and he must have known it was not necessary. When on road last July I specially called Snyder's attention to the then overstock of material in his yard. Over 2000 car axles were piled up there when there was no occasion for his having over 300 or 30 days stock on hand and this on a falling market.

We have not had a letter from Duff or Durant saying how matters stood since they went out. We only get letters from you and we would like to give you all the money you need, but we can't do it till we get our matters settled up with the Central. How much will they owe us on the road west of Ogden above the Government bonds? You must make it cost \$60,000 per mile if possible. If we could get \$2,00,000 from them above Government bonds it would help us out. I have hoped when the road got to running we could get enough from it to pay up Snyder's bill and he could get along without aid, but recent intelligence dispels that hope."

The following is a copy of my dispatch:

"Promontory, Utah, May 10, 1869.

General W. T. Sherman,  
Washington, D. C.

The tracks of the Union and Central Pacific Railroads were joined to-day at Promontory, Utah, 2500 miles west of the Atlantic, and 790 miles east of the Pacific Oceans.

Your continuous active aid, with that of the Army, has made you a part of us and enabled us to complete our work in so short a time. I congratulate you upon it and thank you for all you have done for us.

G. M. Dodge."

At the same time, I sent a telegram to General Sherman.

I do not have a copy of this telegram but it recited the fact that the Union Pacific had built in three years what the Government had allowed them to finish in ten; that we were enabled to complete the road in so short a time because we had the interested support of the army from the beginning, and without this, we could not have accomplished this great work. I expressed my thanks to him and General Grant for the individual support they had not only given the company but to me during the entire time.

In answer to this, General Sherman sent me the following dispatch:

Washington, May 11, 1869.

"In common with millions, I sat yesterday and heard the mystic taps of the telegraph battery announce the nailing of the last spike in the great Pacific road. Indeed, am I its friend? Yea. Yet, am I to be a part of it, for as early as 1854 I was Vice President of the effort begun in San Francisco under the contract of Robinson, Seymour & Co. As soon as General Thomas makes certain preliminary inspections in his new command on the Pacific, I will go out, and, I need not say, will have different facilities from that of 1846, when the only way to California was by sailing around Cape Horn, taking our ships 196 days. All honor to you, to Durant, to Jack and Dan Casement, to Reed and the thousands of brave fellows who have wrought out this glorious problem, spite of changes, storms, and even doubts of the incredulous, and all the obstacles you have now happily surmounted!"

The accomplishment of this great work was noted all over the United States. The line of the Union Pacific was extended to the California State line and most of the grading was completed to Humboldt Wells, about 219 miles West of Ogden, but the track laying was not so far advanced and the Central Pacific and Union Pacific tracks met at Promontory Point on May 9, 1869, Promontory Point was 1186 miles West of the Missouri River. During the same period, the Central Pacific road had been built from Sacramento to Promontory Point, a distance of 638 miles. This rapid building of the Union Pacific not only astonished the people of the United States but of Europe as well. The road was completed seven years before the limit of time allowed by the Government. At one time eight miles and 3000 lineal feet of track were laid in a single day and a corresponding length of grading completed at the same time. The road was well built being ready for immediate

use as soon as the rails were down. The Government commissioners who examined the completed road were able, pains-taking non-corruptible men and all work must necessarily be up to the specifications in every way before they would pass upon it. When they examined sections which were not up to these specifications, they took the word of the company that they would be up by the time they made the next examination.

The Union Pacific has fewer short curves and lesser grades than any other transcontinental road. All honor to the men who planned its beginning and who built this road, risking their money, devoting their time and energy and shouldered the tremendous weight of financial responsibility. They accomplished what most of the people of the United States and the world predicted was impossible. They rendered their country great service and should be held in grateful remembrance by it.

All honor to that band of hardy, energetic, pushing men who did the actual work of building the road and especially to that quiet, modest, forceful man who stood at the head of the construction department, who had behind him at all times the chief engineer of the road who stood between the practical successful work of building the road and the theories and bickerings of the Directors in far away New York, who had for three years received and rendered as harmless as possible, the ever varying eccentricities of Dr. Durant.

On the occasion of the completion of the road, there assembled on the bleak mountains side, representatives of nearly all the civilized nations. As the last spike was driven, connection was made with every telegraph office between the Atlantic and the Pacific and every blow was heard throughout the land.

To the representatives of the road there came over the wires the congratulations of authorities, officers and eminent people of every country that could be reached by wire. Another and even a greater testimonial to the proper construction of the road is the fact that when the Canadian Pacific was about to be built, the Dominion Government, some time in 1873 or 1874, examined the

Union Pacific Railway carefully and in making its contract for its building of the Canadian Pacific, they used the Union Pacific as its standard and there was a clause in their contract which provided that the Canadian Pacific, when completed, should be equal in all its parts in its location, road bed, structure, alignment and equipment to the Union Pacific as found in the year 1874. There was nothing in the design of either the Union or Central Pacific to give Promontory Point the world-wide notoriety that it has today. Looking at it with certain predilection and with the confidence that everything is all for the best, I am satisfied the great struggle had a fitting terminus and a fitting place. The spot hereafter will live in the local history of the Union Pacific railroad, and is probably without a similaritude between the Missouri and the waters of the Pacific.

¶ The meeting occurred in the center of a small narrow valley on the summit of Promontory Point, probably not over one mile wide bounded on the north and south by low rounded mountains. There was an air of calm about the country which seemed to whisper, "Peace be still," to the rival <sup>S</sup> who had ~~manfully~~ struggled for greater possessions.

Early in the morning, the engineers and trains of each company faced each other in silence like rival armies on the morrow of a battle. Each hoisted a flag of truce and prepared to smoke the pipe of peace. Those who had expected trouble were disappointed; not an angry word was spoken nor an eye betokened displeasure. From the least to the greatest the aim of each was, the contest is over. ¶

In situation, the last rail was laid 1085 4/5 miles West of Omaha and 638 miles east of Sacramento. When all was ready the multitude was called to order by General J. S. Casement, and the programme of the ceremonies was read by Edgar Mills., Esq., banker, of Sacramento.

The Rev. Mr. Todd, of Pittsfield, Mass., offered an appropriate prayer.

Dr. Harkness, of Sacramento, on presenting to Governor Stanford

a spike of pure gold, delivered the following speech:

"Gentlemen of the Pacific Railroad: The last rail needed to complete the greatest railroad enterprise of the world is about to be laid - the last spike needed to unite the Atlantic and Pacific by a new line of travel and commerce is about to be driven to its place. To perform these arts, the east and west have come together. Never, since history commenced her record of human events, has she been called upon to note the completion of a work so magnificent in completion - no marvelous in execution. California, within whose borders and by whose citizens the Pacific Railroad was inaugurated, desires to express her appreciation of the vast importance, to her and her sister states, of the great enterprise which, by your joint action, is about to be consummated. From her mines of gold she has forged a spike from her laurel woods she has hewn a tie, and by the hands of her citizens she offers them to become a part of the great highway which is about to unite her in closer fellowship with her sisters of the Atlantic. From her bosom was taken the first soil - let hers be the last tie and the last spike. With them accept the hopes and wishes of her people that the success of your enterprise may not stop short of its brightest promise."

The Hon. F. A. Trittle, of Nevada, in presenting T.C. Durant,

Vice President of the Union Pacific, with a spike of silver said: "To the iron of the East and the gold of the West, Nevada adds her link of silver to span the continent and wed the oceans"

Gov. Spafford of Arizona, in presenting another spike said:

"Ribbed with iron, clad in silver, and crowned with gold, Arizona presents her offering to the enterprise that has banded the continent and dictated the pathway to commerce."

Gov. Stanford, President of the Central Pacific Road said:

"Gentlemen - The Pacific railroad companies accept, with pride and satisfaction, these golden and silver tokens of your appreciation of the importance of our enterprise to the material interests of the sections which you represent on this occasion, and the material interests of our whole country East and West, north and south. These gifts shall receive a fitting place in the superstructure of our road, and before laying the tie and driving the spikes, in completion of the Pacific Railway, allow me to express the hope that the great importance which you are pleased to attach to our undertaking, may be, in all respects, fully realized.

This line of rails connecting the Atlantic and Pacific, and affording to commerce a new transit, will prove, we trust, the speedy forerunner of increased facilities.

The Pacific Railroad will, as soon as commerce shall begin fully to realize its advantages, demonstrate the necessity of rich improvements in railroading as to render practicable the transportation of freight at much less rates than are possible under any system which has been thus far anywhere adopted.

The day is not far distant when three tracks will be found necessary to accommodate the commerce and travel which will seek transit across this continent. Freight will then move only one way on each track, and at rates of speed that will answer the demands of cheapness and time. Cars and engines will be light or heavy, according to the speed required and the weight to be transported.

In conclusion, I will add that we hope to go ultimately what is now impossible on long lines, transport coarse, heavy and cheap products, for all distances at living rates to the trade.

Now, gentlemen, with your assistance we will proceed to lay the last tie and drive the last spike."

Gen. G. M. Dodge, Chief Engineer of the U.P.R.R. then spoke:

"Gentlemen: The Great Benton proposed that some day a granite statue of Columbus would be erected on the highest peak of the Rocky Mountains pointing westward, denoting this as the great route across the continent. You have made that prophecy today a fact. This is the way to India."

Mr. Voe, of the Pacific Union Express Company, made a facetious speech in presentin Gov. Stanford with a silver hammer, with which to drive the spikes.

S. B. Reed, Esq., superintendet of construction for the Union Pacific and J. V. Strowbridge, Esq., superintendent for the C. P. placed the last tie in position on which the rails from east to West met. This tie was eight feet long, eight inches in face and six inches thick, of California laurel, finely french plished, bwareing a silver escutcheon with the inscription-

"The last tie laid on the completion of the Pacific Railroad, May 10th, 1869."

The names of the directors and officers of the C. P. Company and the presenter of the tie, were also engraved on the same plate.

Dr. Durant took his position by the north rail and Gov. Stanford stood by the south, and when the signal was given both gentlemen struck the spikes. By an arrangement with W. N. Hibbard, Esq., superintendent of the Western Union Telegraph Company, a wire was attacked to the gold spike, so that when it was struck by Gov. Stanford, that instant the electric spark communicated with the cities east and West, and announced that the work was done.

The cheering thouroughout the ceremonies showed the interest experienced by the spectators; but on the completion of the work there was the wildest enthusiasm and cheering. Cheers were proposed by the Union representatives for the Central Pacific Company, the Central Pacific representatives proposed the same for the Union, Dr. Durant and Gov. Stanford struck hands and greeted each other with the warmest cordiality. The Doctor, in the warmth of his soul, in greeting the Governor shouted, "There is henceforth but one Pacific railroad.". Gov. Stanford was equally enthusiastic.

The two engineers on the locomotives stepped forward to the head lights and each broke a bottle of champaigne on the other's engine.

Cheers were shouted for the President of the United States, the engineers and contractors, and Mr. Dillon made a happy hit

in proposing cheers for the laborers who did the work. The excitement was intense. Mr. Mills read the following dispatches

Promontory Point, May 10th, 1869. 12M.

To His Excellency, Gen. U. S. Grant, President of the U.S.  
Washington, D. C.

Sir: We have the honor to report the last rail is laid  
the last spike is driven-the Pacific railroad is finished." ✓

Leland Stanford, Pres. C.P.R.R.CO. of Cal.

T. C. Durant, Vice President, U.P.R.

Promontory Summit, May 10th, 1869, 12 M.  
To the Associated Press:

The last rail is laid, the last spike driven, the  
Pacific railroad is completed. Point of junction 1086 miles  
west of the Missouri river, and 690 miles east of Sacramento.

Leland Stanford,

Pres. C. P. R. R.

T. C. Durant,

Vice Pres. U.P.R.R.

During the ceremony, the news had travelled to New York and  
before the audience was dispersed the following dispatches from  
leading Californians in the East were received: and the following  
from the Mayor of New York City.

New York, May 10th, 1869.

The Presidents of the Central Pacific and Union Pacific  
railroads, at the junction.

"To you and your associates we send our hearty greetings from  
the great feat this day achieved in the junction of your two roads  
and we bid you God speed in your best endeavors for the entire  
success of the trans-atlantic highway between the Atlantic and the  
Pacific for the new world and the old.

Dispatches were received from S. Stephen, J. Field, Eugene  
Casserly, James W. Nye, William M. Stewart, D. O. Mills, Eugene Kelly  
Co. Lee & Walker, J. W. Seligman & Co., Wells, Fargo and Co., Louis  
McLane, Chas. McLane, Wm. F. Coleman, Jno. Rensley.

There were present a portion of the 21st United States  
Infantry under Col. Cogswell, with a band from Camp Douglas Utah.  
They performed their duties as guard during the ceremonies and made  
themselves generally useful. Their band played several enlivening  
airs.

There were present a large number of influential citizens  
of both the eastern and western states- Judge Sanderson, of the  
Supreme Court of California, Drs. Stillman, San Francisco, Dr.  
Harkness, Sacramento, J. W. Haynes and Wm. Sherman, Esq., of Nevada  
and F. A. Trittle, Esq., Nevada; Government

commissioners: Chas. Marsh, Esq., Director of the C.P.R.R.; General Houghton, of Sacramento, and Gov. Safford, of Arizona; E. Blackburn, Ryan, Esq.

Among the other gentlemen connected with the U.P. were Hon. John Duff, director, Silas Seymour, consulting engineer; H. M. Hoxie, Assistant General Superintendent; T. E. Sickles, engineer, contractors, General J. S. Casement, Dan. Casement, Col Hopper, Major L.S. Bent, Captain J. W. Davis, Deputation from Salt Lake- Hon. William Jennings, Vice President Utah Central Railroad; Bishop Sharp, Colonel F. H. Head, superintendent of Indian affairs. Col. Feramorz Little. From Cache Valley, Pres. E. T. Benson. From Ogden, President F. D. Richards, Bishp West, Major Barr and T. B. H. Stenhouse.

There was a large number of persons from various parts of the country; D. K. Allen, Esq. of Corinne, W. W. Foote, Esq of Mississippi; George C. Yates, Esq. Of Tennessee, Clinton Butterfield, Esq. of Chicago; Joseph Harrison, Esq. of Burton, - on Trent Edward England; Hon. Esq. Creighton, of Omaha; Mr. J. S. Megeath, and a fine sprinkling of ladies. The press of San Francisco was represented by Fred Macrellish of the Alta; Mr. Bell of the Bulletin, Mr. Parsons of the Times; Dr. Adonis of the Herald; and other gentlemen whose names escape us. The eastern press was cared for by some gentlemen present."

The mayor of Chicago and Omaha wired that thousands of citizens were celebrating the completion of the road. Similar dispatches came from New York, from the Government and the prominent citizens of the country.

After all the ceremonies were over, Mr. Stanford invited the principal men of the Union Pacific, contractors, etc. into his car where he served a <sup>lunch,</sup> had plenty of California fruit and plenty of champaigne. Several speeches were made, by Stanford, Crocker and some others. Stanford, in his speech, made a severe attack upon the Government. He went so far as to claim that the subsidy, instead of being a benefit, had rather been a detriment, with the conditions they had placed upon it. His statement struck everyone

so unfavorably that Dan Casement, who was feeling pretty good, got up on the shoulders of his brother, Jack Casement, and said to Mr. President of the Central Pacific: "If this subsidy has been such a detriment to the building of these roads, I move you ~~sir~~ that it be returned to the United States Government with our compliments." This, of course, brought a great cheer but put a very wet blanket over the rest of the time. Casement's apt response was spoken of for years and years afterwards.

Our work after the completion of the road was to put it up in compliance with the contract and specifications and to the acceptance of the Government, which I immediately gave my attention to.

(869) On May 11th, Mr. Glidden wrote to Messrs. Duff and Dillon as follows:

Boston, May 11, 1869.

"Wrote you 1st, enclose herewith copies of messages since. Hope this may not find you, but that you will be on the way home.

Regret very much that neither of you wrote Mr. Ames or any of us. Your telegrams confuse us. We hear from Gen. G. M. Dodge, but fear that you find matters so bad you don't like to write, and then your not offering to help with either bonds or money troubles us, but we hope soon to see you here and get some explanations. As telegraphed, we deposited in all \$400,000 in Central National your credit, First National, Omaha, besides the \$100,000 in Ocean to credit of W. and M. and now have advice from Kennedy of having drawn \$50,000 by order of T.C.D. and J.D. and \$100,000 by order of S. D. This makes \$50,000 more than we authorized, but presume you were to be at home to help protect it.

You had better notify Price, Webster and J. L. Williams to be in Boston the same day you intend to be here and also bring Dodge along, as all directors will need to be here to organize. If Dodge cannot come, we shall have to elect some one else on the spot-say John R. Duff, who will afterwards resign in Dodge's favor.

Please telegraph us what day you will be here. Hope you have been able to look carefully after disbursements and little per ct. 90 day drafts on Boston and not draw any on New York. this latter may make great confusion, ought not to be done at all.

We get no answer from you to ours of 3d, 8th and 10th all calling for reply.

Bonds have gone up to 93, cts, 93 1-4 and very few offering."

I might say, of each of these letters written from Boston,

A copy was sent to me as they knew I had full charge of everything.

Durant had been eliminated from the construction and the company so far as any power was concerned.

On May 12th, I wrote Mr. Morris the following instructions:

Promontory Summit, 1869.

"Your duties as engineer in charge of repairs are to immediately make yourself fully acquainted with the road and all

its structures over your division and have done all the engineering, running and repairing of track, bridges, buildings, etc.

I desire to make the road smooth and safe without doing any more work than is actually necessary. I want to fix up our bridges and get them in for Dillon to run over.

The repairs are made under the direction of the Company Superintendent and you want to confer fully with the heads of all departments under whom any repairs may come and keep them fully posted as to any defects in road or any repairs that are needed.

As soon as bridges are in over Weber that stream will be out of our way but the temporary bridges over Black's Fork need watching I have seen no masonry or rock that I would want to trust without further trial and tests. I therefore want you to procure specimens from all the quarries and test their strength for both dry and wet masonry. also examine closely the stone in masonry where they are below water line.

In the building of any masonry, I would not want a yard laid unless a competent inspector is upon the ground to see that it is properly done; nor any work accepted until it comes fully up to such specifications as we may direct.

The contractors are still at work on portions of the line. They are not subject to my orders, but it is proper for you to notify me of any defects that you may see in their work.

Keep your force as small as possible and use the strictest economy in your department and in all repairing that you may direct or supervise.

Report to me weekly all repairs made, suggested or needed.

Establish your headquarters near those of one of the division Superintendents, when you can be readily reached, and notify me of the place."

On May 11th, I received the following from Mr. Oliver Ames from North Easton:

"I wrote you this A. M. in regard to the state of our affairs here. We have raised money quite as liberally as we expected and have put up an immense amount of bills. But there seems to be no end to the demand for money on line of road and we are exhausting the means of all our friends to help along the road.

I hear nothing from Duff or Dillon since they have been out there. We have written them frequently to get some reliable information as to how the funds of the Company were being spent and what amount is wanted to get the road running smoothly, but we have yet been unable to find out anything reliable. Dillon telegraphs he wants \$500,000 at once. You telegraph you want \$500,000 and Duff telegraphs he wants \$100,000 and Seymour will take all we can raise. We really do not know what is wanted or where it is going. If we could see plainly just what is wanted we could go to work with more certainty of reaching a result, as it is now, we are just as much in the dark as we were before the Committee went out.

Snyder in consenting to these large orders by Frost has neglected that close supervision that his duty requires and should not have allowed. I wish you would report to us as we have no hope of getting letters from Duff or Dillon descriptive of state of the road.

The bridge we hear nothing from yet. If we press this we must get money I think by a separate organization, and we ought to have a bridge immediately if we have a big travel.

We expect to get a telegram from you when the last spoke was driven that the principal office of the company might know that the road was connected. We this P. M., too late to get into the evening papers, have a telegram from you signed Dodge, Duff, Dillon and Durant saying the work is done. It would have been just as well for Duff to have brought it here in his pocket."

On May 12th, I received the following letter from Mr. Ames from North Easton:

"Your letters from line of road are received. We do not quite understand the way you are getting along. We expected when we sent out Committee to examine the road that the money we raised would be

paid out to get the rails together and then to keep the road running. We have raised a large amount of money on land grants and other bonds, and sent it out, but there seems to be no relief and we feel that the vortex out there will swallow all that can be raised out of our securities, and then perhaps the mobs on line of road will stop the trains and the next thing we shall hear is that the trains have been stopped and passengers robbed to pay starving men. It would have been better to have called out the military and stopped this first mob, and then we should have had no more trouble.

I am informed that Davis and associate men were the parties stopping the train. Could it be one of Durant's plan to have the men get their pay out of the road and we suffer for his benefit? Durant is so strange a man that I am prepared to believe any sort of rascality that may be charged against him. You say the road is running smooth to Aspen and will soon be smooth to Junction when our road will, with exception of bad work on bridges, be in good order. I have feared that the spring freshets would carry off a large number of bridges and sometimes delay our traffic.

The last rail having been laid there will be relieved a large number of engines and freight cars from contractors material, and we shall have more engines and freight cars than we know what to do with."

The pressure for payment of the contractors became so great that we arranged with some of them to give ninety days drafts on the Omaha National Bank. We were drawing from \$50,000 to \$100,000 every day.

1869

On May 14th, I returned to Council Bluffs, after having given close attention to everything, preparing to meet the new commissioners, and I wired Mr. Ames on my arrival that I would remain until the Walbridge commission got there.

On May 12th, I received the following letter from Mr. Chandler our attorney in Washington:

"I am confined to my house by illness today, but last night had a full talk with Gen. Warren who seems to be disposed to be fair and just as far as the interests of the Government will allow. With reference to the alignment and grades of the Central Pacific he is disposed to be very hard upon them.

I am not certain that it is for our interest to hurry the question of bonds too much. Perhaps it will be better to let the Central road take the laboring oar. In no event have we an interest more than \$275,000 If we add to that the first mortgage bonds now on deposit 160,000 The Government will retain from us 4,353.000 Now, I imagine it is quite possible that the Commission may think that the deficiency on our road is three or four millions of dollars; in which event we need not hasten to ask for bonds.

On the other hand the Central seems to be out of pocket about four millions, not counting the \$27,999 they are to receive from us when they pay for the forty six miles, and until they do pay that, of course, they get no satisfactory right to the line east of Promontory Summit. Mr. Chittenden hopes that the deficiency will be reported by this Commission upon our road not to exceed three millions, and upon the Central not to exceed two millions. If this should be the result the Central will be anxious to get bonds, while we shall not be so anxious. If, on the other hand, either Commission should find a five million deficiency on each road, the Pres. would have to call upon us to put up more bonds in the Government vaults."

1869

On May 15th, I wrote Mr. J. M. S. Williams, the Treasurer of the Company as follows in relation to the future of the road:

Council Bluffs, Iowa.

I have written Mr. Ames fully from time to time. I came in here to meet Commissioners having done all I could west until the entire concern gets under one head. Duff and Dillon have to work cautiously or think they must, and have only so far been getting rid of workmen, laborers, stopping work &c. endeavoring to find a head or tail to the concern, but I guess never will. Crimination and re-crimination, one to another, did very little good. All see the difficulties that we are in, the money that has been wasted, but no one is responsible. I have great faith in the future if you only have nerve, let nothing turn you from putting at the head of your concern men whom you know know the country has faith in, and who will deal, one with the other, honorably and straightforwardly and we can command a great trade. We have got a good road with a few exceptions, it can be run easily, cheaply and be made to make money, but it has got to be run with nerve, with discretion, has got to give and take to command trade and we have got to let the Central Pacific Company understand that we are ready all the time for business.

Huntington is their smart man but all these Californians believe that the sun rises and sets in their country and that all must bow to them; they find differently and begin to see that their interests lie where ours do. So far we are in possession of everything and have all the time seem ahead except in getting our track to the Summit. Had I not made that agreement; we never would have gotten a cent west of Ogden, they see that now.

Get our land into market, get our debts out of the way, take a new deal all around out west and you will have a No. one road, but we can do nothing with the debris of the old concern hanging to us. Men cling to the old dynasty and remember the good things that came from it, they believe in the old gods as long as they have a straw to hang a thread on, and today will, directly or indirectly, aid any scheme that is brought up. What will you do in Boston? When will you hold your election? No one feels secure here as long as these things are held over us."

On May 17th I received a confidential dispatch from Mr. Chandler that the commissioners who had fully examined the Union Pacific and Central Pacific, which has been fully discussed heretofore, had filed their report giving preference to our line in all respects.

The condition of our bond account at this time, is as follows:

U.P.R.R. Bond delivered to 1000th mile	\$25,998,000.
86 miles undelivered	2,752,000
(of which the bond on about 46 miles is \$1,472,000) which	28,750,000

Will in the end go to the C.P.R.R. leaving to remain with the Union Pacific R.R. \$1,280,000.

C.P.R.R. Bond delivered to 510th mile 180 miles in addition, delivered	18,604,000. 1,400,000 20,004,000.
Undelivered	
Total issue would be	53,114,000
If there is a fifty million limitation C.P.R.R. will lose	3,114,000.

1869

On May 15th, Mr. B. W. Miller of Corinne, wrote to Mr. Snyder as follows:

"I made myself acquainted yesterday with a plot now being carried to completion on the part of the Central Pacific. They have secured the services and co-operation of the western manager of Wells, Fargo & Co (I presume by the use of money) who has repaired to their headquarters in New York with the sole intention of influencing the Company to move their offices at this point to Indian Creek on the C.P. makes that the starting point for all their stage routes and also the general distributing point for all northern and north-western mails.

The only opinion I can form as to the reason for this is that the C.P. has been unsuccessful in their attempts to purchase the western terminus of this road and are trying to deprive the U.P. of a town in the Valley, thereby destroying what local trade that might accrue from a flourishing town at this point. I apprehend that another reason for so doing is that when Indian Creek shall have been made the headquarters for all diverging stage routes and the mails, they will make considerable reduction in their freight tariff, thereby securing to San Francisco and to their route the trade of Idaho, Montana, Southern Utah and the White Pine District. None of the merchants at this place are aware of this movement, and I transmit it to you in the hopes that it may be of some service to you in the formation of your future plans.

Every day or two I am possessed of information in regard to the construction swindle which closely resembles like information that I have already forwarded to you. I presume the most successful single operation that has occurred west of Wahsatch was the grading contract of a mormon by the name of Rice, and which said operation was the real cause of the sudden resignation of Capt. Bates of the engineer corps. The latter having received \$5000 for making false estimates and specifying in the contract so much grade and so much rip rap work. It is useless to say the Rip rap work was never put in, as the original work through Echo Canon will testify to at the present day; and this very same course between engineer and the construction was pursued in the estimates of work to be done in the erection of Devil's Gate bridge, and no person with a sane mind can examine that bridge and then examine the nature and swiftness of the stream it crosses without coming to the conclusion that it was erected with a solitary view to speculative purposes.

If it be not troubling you too much I would be pleased to have you drop me a line, stating whether you would have me pursue any different course, and if the information I have already forwarded be in accordance with your wishes in the premiseses."

On May 15th, I wrote to Mr. Oliver Ames giving him an account of the arrangements that were made at Promontory and for the connections of the Central Pacific, as follows:

Council Bluffs, Iowa.

"I left Promontory summit Tuesday after we were well established there with Hoxie, Asst. Supt., our ticket agent, telegraph office, &c. After our people left Monday, Gov. Stanford notified us that he would put in a siding on his old grade, that our line covered and east of our connecting point and told Hoxie not to put any in, but I immediately ordered up Casement, put the siding in before day light and when their workmen arrived in the morning we had it completed, much to their disgust. I then made arrangements that all transfers should be done opposite our office and opposite our main track. I then came directly here to meet Commissioners. Morris was here with a party and no instructions. He went west last night with his party to remain until Warren and Wilson arrive. I hope contractors will get in bridges over Weber before they examine as the two left are frail and unsafe, permanent ones are on ground and should go up in a week. Contractors still hold control of bridges and work out there and the company can do very little until one or the other assumes full control. Track from Wasatch

west is being fast brought up to good, running order but with the excitement of paying off, settling up &c. it is hard to get that down in shape; men are reckless and all will have to be cleaned out which will be done as soon as construction crowd is paid off. Snyder managed to collect money enough to pay off to March first west of Pararie, but east no payment has been made since December and men are discontented and getting demoralized. As fast as discharged they are paid off, and it takes more than the road can earn. I am afraid of trouble daily. I came down and saw most of the men and assured them they would be all right to only be patient. Indians are also beginning to trouble us and I have arranged with Augur to get troops on line immediately; have now got them posted at North Platte, Alkali, Ogallalah, Julesburg, Sidney, Pine Bluffs, Cheyenne, Laramie and Benton. Durant and Seymour are still out there. I suppose Duff and Dillon started in today. Price is here to meet them. We have got to replace most of Cottonwood ties; they are rotten and getting unsafe. We ought to get our ties for 50 to 60 cents unless we are obliged to take what Davis & Co. have; they claim to have four to five hundred thousand, but no one can tell.

We can get no books or notes from contractors as yet, and until we can get them, engineer books, it is impossible to measure anything; all we can do now is to hold our bridges together until high water is gone; then we have got to overhaul all of them, wood and stone, west of Bryan. We now are running around a good many, which looks bad, and will tell against us in the examination of the road. Those who put them in claim that it was done according to orders; fact is, stone that looks well and that any one would use, seems to be of no account as soon as it comes in contact with water.

Travel is good but freight scarce, we must come down low with through freight and get it through this way; it can be done; once in this channel it will stick. Central Pacific still hold to ten cents in gold per mile. They were first for very low rates, now very high; they are getting on to their road a good many of our discharged men and thieves. I suppose they are very anxious for a settlement and I would sell from 1040th mile post west; the line over Promontory is very hard to run. If we could go to Bear River (Corinne) it would be a good point for junction, but they probably will not consent. It is hard to bring them to any point.

The entire Mormon outfit is solid against us and with Central Pacific and they have done us more injury than we can make out of them. After bleeding us to death they turn against us, but the gentile population is with us.

I am in favor of immediately putting Chinamen on our road as section men and laborers, commencing from the west and gradually working east. The Irish labor with its strikes, its dead fall whiskey shops and reckless disregard of all our interests, must be gotten out of the way. The Mormons prices we have paid them has ruined them. Chinamen are excellent workers, the best I have seen, are faithful, thorough and careful, and will cost about \$35 per month, in gold, and find themselves, all we have to do is put a white boss over them. Snyder has cut his labor down to \$2 per day. I find no very large surplus of material on hand that a road actually needs, but plenty of traps and stuff that is no use, ordered by one and another which counts up big on paper. As far west as Piedmont everything is picked up and stored at Section Houses, west of that it is scattered but will be gotten together as soon as track is up. While I was out from Piedmont to Promontory, track improved 100% and had bridges stood up, today we would be all right on track. One steam shovel is at work doing good, others will get to work Monday. Track at head of Echo will be laid next week. Casement is now on his way back there, but we have so many high trestles made of found timber as it came from the woods that it may give us trouble in report of Commissioners.

Our coal trade with Central Pacific can be made large, and if Central Pacific put down rates, it can be made large as far west as Nevada. The Company is now paying \$3.57 per ton and get all coal west of Missouri. I could have gotten entire government contract for coal if I had thought the Company wanted to go into it. No contract was let, the outside bidders were so high.

I hope Dillon and Duff will get at the bottom of our indebtedness by time they return, but I doubt if any one can tell what is owing west. Snyder paid \$400,000 of Chicago indebtedness on 90 days drafts. Some one

wrote to Chicago, you were going to pay that way an' they were all here before he got the order. Ninety day drafts will not pay here. You will have to raise about \$500,000 and I tremble daily for fear some gang will stop our trains as they did at Piedmont. I hope by getting troops at most important points to be prepared for any such emergency. I want to know exact condition of matters east, we are working in the dark here and having to assume so much responsibility I am afraid I may do harm. If I am kept posted I can avoid any bad mistake. You want to settle with Central Pacific east but be careful what you do. Send me maps and profiles from New York,; it will save me making a duplicate copy for commissioners, they generally ask for everything.

I have put Morris on repairs from Green River west; called Hudnutt home and now have only Webster, House and Morris. The Gov. is in communication with New York all the time and is fully posted.

Lots sell along the line occasionally but we have hard work to hold town sites where land is not surveyed. Cheyenne will be the capital of Wyoming and will help us there. Lands should be put in market; we can sell one million of dollars worth this year, but I should put some such man as Wilson of Iowa, or some one with national reputation at head of that Department. What we want now is men of reputation and of known integrity, and a harmonious strong determined push by Central Pacific and Union Pacific for the trade and travel of the country. When will you hold your election and what will you do?

Snyder is making up list of present force and past force. I want him to have a show at this road once under fair sail. Tracy is after him to take C.R. I. and P. but you must not let him go. Let them abuse him as much as they please, he is honest, able, smart and they all know it. Two weeks while I was out on one division, ten conductors, and six engineers were discharged and were we paid up, we could soon get an able running force.

Sleeping cars run to Cheyenne, then to Promontory , only one change; charging for day and night seats."

On May 18th, I received the following letter from Washington from Mr. Blickensderfer giving me an account of his report:

"A few days ago, the first part of our report on the line between the ends of the track was transmitted to the Secretary of the Interior. It was a unanimous report declaring the line of the Union Pacific as entitled to the preference over any and all other lines between Ogden and Toan's Summit signed by every member of the Commission.

I rather think it went hard with some gentlemen to sign this, but the facts were all against them and they had nothing to hang even the semblance of an argument upon. The details in reference to the lines of both companies were fully stated and discussed sufficiently to bring out the respective merits of each, so as to render the conclusion inevitable. The report also shows that the location of the Central Pacific Company, the line on which their road is constructed, is not the line which was filed with Secretary Browning, but an entirely different one. The line they filed from Monument Point to summit of Promontory and eastward takes the old line of Hudnutt on west side of Promontory through the pass at Haystreek Mountain and passes near Cedar City, and does not go through the pass southward around the limestone points where the road is built and where our location was made. The distance between the two lines on west side Promontory is about 2 1/2 miles.

We have nearly completed the balance of our report and will transmit it in two or three days. I expect some difference between the members of the Commission on this point but cannot safely say yet what its extent will be, but I think it will not be anything very serious. When we have come to a decision and made the report I will write you. I have been excessively busy and have written scarcely any letters since here. Warren and I have had the work to do as neither Williamson or Clements did much except to wait for our results.

We detected several errors in the map of your line. Angles were sometimes turned in the wrong direction, sometimes curves were omitted, and sometimes varied from the truth 10 degrees more or less, by reason of the length of the curve being ten stations in error, &c. When we get done, I will advise you and I think you should correct the maps filed with the Secretary of Interior.

Your location from head Echo to Ogden will I have no doubt be sustained complete, and your lines in general fully endorsed, but in regard to all these things I cannot speak with entire certainty yet.

How is the road by this time? Is it being gotten into good shape? and what seems the prospect for business? Write me to my home, Tuscaramas, P.O. Tuscaramas Co., Ohio. I shall always be glad to hear from you. I have now been from home so long I cannot say how my affairs are, and I must remain at home a short time when I get away from here to see how things look. Will try to write you again from here before my departure."

1869

On May 20th, Mr. Ames wrote me from Boston as follows:

"Your favor of 15th is received. The maps, profiles and all those things in N.Y. in Receiver's hands, and I do not know as I can get them if I send for them. I will order the things you want sent to Omaha and if they go it will be all right. They were all packed up for transportation to Boston just as soon as released. I may be able to get them immediately and will try.

We are spending so much money in paying up bills that we begin to feel here that we shall be hard pressed for means before we get the road through. Duff, Dillon and Price had the full power of the board and ought to have exercised it and left Durant out. I sent Duff a copy of the resolutions which he must have gotten on his return to Chicago. Durant had no power and should have been ignored. Seymour wrote he should return. I have not heard from him since you first gave him the letter.

The report you make of stone and so frail character seems very discouraging. If we cant have good stone we better trust wood which is more reliable.

The state of matters on the road is not as satisfactory as I wish if we could have good receipts through June and July to give us confidence, we should feel just as soon as we see the road earning money enough to pay interest on bonds and stock that we should have a good property and would have courage to put our money in. We are now raising all we can on our land grants. Just as soon as Duff and Dillon get back, we will organize. We have thought that our new organization would make a thorough overhauling of matters and have things on the square. We have supposed we could have the contractors business wound up and all the contracts finished up by company. This thing we have got to do some way; what is the best way we will decide after Dillon and Duff get back."

On May 21st, Mr. Chandler wrote me from Washington that Mr. Huntington was anxious to have our road carry out their agreement relative to the line from Ogden to Promontory, and thought we had better arrange the amount. It is important for both roads to settle all differences and get into harmonious operation together. If not, I suspect they will lay another track from Promontory to Ogden. I hope, therefore, you will agree upon the town site, the price to be paid the Union road and let the financial arrangement for settlement be made at the East. Please write me on this point."

On May 22nd, Mr. Ames wired me from Boston to send in an affidavit of material on hand and expenditures since date of Commissioners examination; and also the following letter:

"Mr. Duff got back this morning. Have had a long talk with him and am sorry to hear so bad an account of the way things are managed out there, and the reckless and extravagant manner in which our affairs have been and still are managed; and his inability to find out the amount of our indebtedness on the road and our liabilities to contractors. I think you should have everything measured over and not pay for any more yards than we have had removed and not pay for rock where it was earth, and should be some way to correct or hold back something from our stone work that has been so poor.

Duff tells large stories about the amount of stone hammers, drills, and scrapers we have on hand that never were used. Those things should be picked up and sold and save all and everything one can. I dont see where the money is coming from to meet all these claims that are coming against us and pay the interest on our bonds unless we earn a great deal on the road. I think we should have large interest from passengers and quite an amount from freight that will help us out.

I dont know when we shall choose our officers. Dillon and Durant have not been here, but believe Dillon reached New York today. We can manage without your coming here by putting in some one to act while we organize the meeting, and then let him resign and put you in his place, and when the names are published you will be named with the rest of them.

We must not let those Central people cheat us again if we can help it! When the Government Commission go out we must have the right men with them to show them all the good points on the road and not have them see any bad ones if we can avoid it, and where they are bad we must insist that was the best that could be done at the time and that it is safe and substantial and will be improved as fast as it is necessary for safety and a reasonable time for us to do it in.

Those rotten ties must be replaced at once of you will have accidents that will be costly to us."

They seemed to be getting thoroughly aroused in New York on the condition of the line, while the fact is if they had acted when I wanted them to they would have been saved from all their trials and tribulations.

On the 6th day of November, 1867, the first child was born in the City of Cheyenne and I received the following letter in relation to it:

Cheyenne, May 22, 1869.

"On my arrival in Cheyenne in July 1867, I was informed by R. E. Talpey, local agent of the P.R. Company here, that the Union Pacific Railroad Company would give as a premium two lots in Cheyenne to the first male child born in this city. On the 6th day of November, 1867, my wife was blessed with a son who was the first child born in this city. My son's name is George Wise and is a fine sprightly boy, and if it was really the intention to transfer two lots to the first male child born in Cheyenne, I would respectfully request that your local agent here be requested to do so.

You may possibly remember me as I was, during the war, 1st Lieut. Company D., 2nd Colorado Vols., and acting chief of staff to Brig. Gen. James Ford, Army of the Border." (Signed) William Wise.

I had the lots which were promised deeded to this child.

On May 24th, Mr. Ames wrote me from Boston, as follows:

"I have received a number of letters from you about the road recently, but from the great uncertainty of a letter reaching you, I have not answered. The terrible state of our affairs on the line and the cost of the road and our indebtedness is so much larger than I anticipated that I have felt too blue to write.

Duff and Dillon on the line have not written a letter since they left Omaha and nearly all the information we got was from you, except Dillon's drafts which came down upon us quite as fast as we could raise the money. Duff got home Saturday and his reports do not very much elate us. The purpose for which this Committee went out has not been accomplished at all. To ascertain our indebtedness, to re-organize our matters and to establish if necessary an entirely new organization was the purpose, none of which have been approached. We must have an entire organization of our Board. The wasteful and extravagant way that the road has been operated in its construction has demoralized our employees and new men will have to be put in who have not been tainted by contact with plundering contractors and conductors.

We must start on rigid principles of economy in every department and exact accounts must be everywhere enforced. Our road has been and I presume is now being run without enforced system. We want daily returns and weekly returns promptly made, but we have never been able to get them. We want a better system in our purchasing department. If we have a good purchasing agent, we should not have \$1,500,000 of stuff in our shops at Omaha. I think Snyder is quite as much at fault here as is Frost. We did not expect Frost knew anything about the wants of the Company, and I understand he says he has never bought without a requisition. Snyder ought to have known by walking through the yards that he was over-stocked. Congdon is wasteful and careless. What is being done about shops at Cheyenne? We have spent \$200,000 or more there and I understand we have nothing. We have got to cut down our expenditures every where and our shops have got to be put up on a more limited way till we have money to extend them.

We shall probably have an election of Directors this week and we may be forced to have it tomorrow to escape any traps that may be sprung upon us by Fisk or any of his or other combinations. If we should, we shall probably put in a few persons to resign and give place to yourself and some others who cannot be present. We decided not to have a meeting until Duff and Dillon got back; they having now returned we can have our election at once and the sooner the better probably. I am so thoroughly sick of my connection with the road that I propose to get out of it just as soon as I possibly can. If I could go out today I should be a happier man.

How is your Council Bluffs' Bank getting on? I have never had a circular or any information in regard to it since it was organized. Our railroad lands at Council Bluffs ought now to be becoming valuable, and if we put our terminus where we designed they will soon be valuable. Some one should be put in charge of them at once."

<sup>(86)</sup>  
On May 24, Mr. G. K. Warren wrote me from New York as follows:

"I leave here tomorrow evening. I have the instructions for the other commissioners. If Judge Wilson has not gone out inform him that I am coming.

I saw your letter to Chandler just before I left Washington. I agree with your estimate of the C. P. People. I have informed Mr. Ames as far as I could not to be bluffed by them. I saw Dr. Durant this morning. He has the same idea of them."

On May 25th, Mr. Reed sent me his estimate of work done on completed road East of Ogden from March 1st to date as follows:

"The following is a copy of statement sent you by mail today properly sworn to:

Grading and tunnel work east of Ogden from March 1st to date 513157.97. Bridging and masonry 60866.37. Truss bridges delivered on line part raised, balance ready to raise 201984. Incidental 7812.74. Track laying head of Echo 10,000. Ties on hand \$835626; lumber for building and bridges on hand \$121492.47. Total \$998,848.55."

*M.W.* 1869  
On ~~April~~ 25th, the Union Pacific Company held its regular stock-

holders meeting in Boston and elected a board of directors which had been agreed upon, leaving out Mr. Durant in accordance with the directions of General Grant and putting in a Government Director whom he had selected. I was not present but one of the clerks of the company was elected in my place to resign whenever I could be present.

On May 26th, I wrote Mr. Ames from Council Bluffs, as follows:

"I am in receipt of yours of 20th; also telegrams about filing affidavits. I have telegraphed Mr. Reed for amount of items expended by him. I have no access to any data by which I can determine it, everything relating to contractors' matters are kept from me, I suppose under instruction as I have been often told I had no right to the information. If you have not done so already, you better telegraph to Reed to send me the affidavits as soon as possible, amount spent by Snyder and materials on hand we will get up here. We have no knowledge of what is under contract East.

North Platte eating house finished two days ago. Been caught from the Chinese. We have two houses on hand, and we will put one up at North Platte and one at some point West, have not settled at ~~what point~~ we need it badly, and yesterday another Pier in Green River went down and we are transferring there. I think we will get it up tonight. Blacks Fork is also giving away. My engineers report that the masonry under bridges at two places is settling and that the seasoning board being put in there is poor. I suppose you have plenty of money to throw away as there is very little doubt that all of it will have to be rebuilt or patched up within a year. I do not see as the poor work done has any effect but to keep the same men and contractors on such work.

The C. P. folks will be in New York next week, and you want to settle with them immediately and sell them the road built to Hot Springs or to the 1040th Mile post not farther east than that - Hot Springs is the best point for us to run to. At any rate we must run West of Ogden from 1040th mile post, we do not want the road, we want to get rid of it. It has 116 feet grades, 10° curves, in fact, its grades are equal to 132 feet, with high rough trestles and good deal of work to be done on it to get it in shape. If you have not got the cost, Reed should furnish it to you. I could get nothing out West to base an estimate on, the only answer I got to my inquiry was, they did not know you will have the entire construction outfit out there on your hands all summer, and what they have not got now, they will have before long instead of helping to keep men easy, they take every way possible to make them uneasy. They are coming in here and say they can get no satisfaction when they can get their estimates or whether they can ever get their pay. It is not very easy to run a road with a class of discharged men around, growling and looking for the coming of Durant, or some one to give them a new lease of life.

I raised yesterday \$35,000 to help Snyder through. If we were paid off we could earn enough to pay interest on bonds - C. P. are doing all they can to discourage travel. Stop passengers 22 hours at ~~Promontory~~. We ~~must~~ must have a settlement at once - sell, get our pay and make running arrangements. I am in favor of bringing through freights down immediately to Local freights would hold up pretty well.

C. P. are now coaching the new Commission; have men who are or personal friend of each Commissioner and will have along over their road a will not do for you to keep quiet East. These men should be seen. You should get upon friendly terms with them and have them start out feeling well towards us, that is all unless they do you may expect to suffer for there are a good many things on our road that wont bear investigation and with the set of corrupt engineers, construction contractors, contractors whose contracts have been cut off for coal, wood and other schemes, you may rest assured they will get their minds well filled before they get across. When they come out some of our company should come on with them,

Snyder and myself, before this you have heard Duff and Dillon's story, my views of what should have been done out here and what should be done now, I am sorry to say is different from theirs, had I have had the power. I dont believe any one would have stopped our trains, and it would have been known and felt from one end of the line to the other, that there was a new administration formed, they possibly know better than I do, but one thing certain your hesitating about the establishing of lines, has been, with your business methods, &c.. losing you in all quarters what little confidence people might have had in you, and we cannot long even expect to hold the good-will of the powers that be."

On May 27th, Mr. Morris wrote me from Echo as follows:

"I have made a trip over the division assigned to my charge and several trips over portions of it Mr. Reed requested that I should give some time to arranging the notes and estimates of the Promontory Division, which I hope are entirely completed today, leaving me at liberty to give all my time to the new work.

I find most of the track needing prompt attention particularly on the salt flats near Promontory between Bear River crossing (west) and Desert; from Wahsatch to Aspen and a few miles near Cactus station. The most pressing of these is from Wahsatch east. The rains we have had during the past two weeks have softened the ground in Bear River bottom rendering it unfit to hold the ties. The excavator working near Evanston is putting out gravel much faster than the men now working on track can put it under. The widening and raising of the banks can be done by casting from the sides and all the gravel used for surfacing and ballast; but a good, large gang of laborers is needed.

I had made arrangements to go from Wahsatch to Green River on a hand car when I received word from Green River that the bridge was down. I will make that trip as soon as possible and carefully examine the bridges on Black Fork and Muddy. I found on examination of the Green River Bridge that all the piers (formed by cribbing) had been protected by rip rap except the most easterly one and that had not been protected in any way, and that the current from the rip rap of the one next west striking against the face of the easterly one had undermined it. It was fastened to the shore by ropes to prevent slipping and a temporary cribbing of timber put inside the pier to replace the first span of the bridge which had to be removed.

I also had piles driven about another crib which was settling and had it protected by rip rap. The piles were driven to a depth of

8 ft. without shoes, which proves that on the western side at least we can use piles for permanent foundations. I examined the crib which had been built for the river pier of permanent bridge. I find it to be a shell without any ties or cross pieces and not suited without being filled with well driven piles for the foundation of that work. Is the permanent bridge to be put in as soon as the water in the river will allow? If not we will have to put in a new span of 50 ft. in place of 40 on east end of bridge and arrange to protect present cribbing with piles and rip rap.

I have established my head quarters at Wahsatch and Mr. Ricksecker has moved office to that place. Shall I box up and send to your office in Omaha all maps, profiles and papers relating to location? When called away from Wahsatch, Mr. Ricksecker will know where to find me at anytime.

I would suggest as my idea of the best plan to put up the track on this division, that a good surface be put on the whole line without any regard to low places in the grade or swing in the alignment- first, then perfect alignment and grading on the heavy grades so as to obtain full advantage of the motive power, and thirdly to remove all trestling and put in permanent embankments and bridges as fast as may be thought advisable by the company. The iron on the rough portions of the road is suffering, and I would like to have the surface perfected as soon as practicable. The big trestle on Promontory needs bracing. A gang of men are now at work at it, but we need more piles or planks. The contracts I understand for material and work are to be made by the Superintendent or his agents and not by me. The trestle work on the permanent line at head of Echo needs thorough bracing. I have consulted with Mr. Kendall and Elleston in reference to these and all bridges on my division. The embankments on the same line are settling very

badly- the rock in the embankments is slacking like lime and we will have to have a train running from an excavator for some time to keep the road in a passable condition.

There is a dangerous looking ledge of rock near Green River crossing very high and very loose. We might put in a lot of powder and blow most of the rock clear of the track.

Mr. Bissell has decided that he will not stay but return home at once when relieved by Mr. Reed. I would like to have a profile of the track as it is showing what grades &c. we have and serving as a guide for repairs and alterations.

I would like to know as soon as convenient what temporary structures, if any, you intend replacing this summer so as to guide me in any repairs necessary to the temporary ones, and so that I may make the plans for the masonry and submit them to you. As I understand my position, here, it is to do the necessary engineering, superintend any new work, report to road-masters and bridge superintendents any defects, I may see in road bed or bridges, and to suggest to heads of departments any improvements or repairs; that road-masters and superintendents of bridges will receive their instructions from Genl. Supt. and his agents and do not report to me. That the floating gangs and excavators are under the control of and direction of the division Supts. and that I am to suggest and not to direct where men shall work. I am anxious to know as fully as possible what you intend my duties and authority to be.

There is a good quarry of limestone rock at Promontory near your camp at Sculptured Rock Springs-by far the best stone I have seen on the line. There is also good limestone in Weber if we can only find it in ledges so that it can be worked. I will have all rock which has been used put under pressure and tested at once.

To whom shall I return pay rolls and vouchers? Shall I direct you at Omaha or Council Bluffs? I will need some stationery and office furniture. To whom shall I apply? What steps shall I take to procure office room at Wahsatch?

1869

On May 28th, Mr. Hiram Price, the Government Director, wrote me from Boston as follows in relation to the election:-

"We are, and have been for the last few days, moving along at not a very rapid rate. I write more particularly to explain to you why you were not placed upon the direction at the election of the Directors on Tuesday. First then, it would have been impossible to give you notice after the election in time for the first meeting, and it was feared that Durant and some of his friends would seize upon this technical omission of a requirement of law to give the company trouble in some shape. In the next place, it was necessary to have a quorum of the Board in order to transact business, and with the present arrangement we have most of the time only had a bare quorum. We have attempted to close the accounts between the Company and the contractors and I supposed this was certain to be done before the day closed, but after a meeting of the Trustees and a Committee of the Company had been had it was found that the accounts were not in shape for nearly a week; so I suppose the matter will hang ~~here~~ not in shape for ~~much~~ that much longer.

I am urging the idea that Dillon and I talked of before I left Omaha, and am assured that you shall be placed on the Direction just as soon as this is done and that the resignation of John R. Duff is now in the hands of Oliver Ames to be used for that purpose at the earliest possible available moment. I want you to possess your soul in patience and accept of this position on these terms. I am speaking for the good of the company and of the Government! I would have done this business differently if I could have controlled it, but it is the part of true wisdom when you cannot get the best thing, then take the next best.

Brooks was here the first day but has left. Wade got here yesterday but he is a new man and until he gets better acquainted will not be disposed to take any active part. No other Government directors here.

We have had a pretty general discussion today in reference to continuing Snyder, and I feel satisfied he is safe."

On May 29th, I wrote to Mr. Ames from Council Bluffs as follows:

"I have your letter and Oakes. After seeing Mr. Duff, you take a gloomy view of matters just as I begin to feel better. You were aware of this state of things for nearly a year. Now we are just emerging from it; all I have to say is, meet it as it should be met, ~~not~~ by charging it to subordinates, ~~but~~ bring it right home to New York where the root of the mischief is, where the foundation for all your trouble has been laid and where corruption, dishonesty, extravagance, ~~had~~ been held at a premium. Men out here have only followed the open example set them and none of you can plead ignorance of the state of affairs for you have been told and plead with to change it. I am not disappointed, matters are not so bad as I expected, and the running department of the road is in far better condition than any one could expect. Employees unpaid for four months, over two millions of dollars owing and hardly one cent yet received to pay it off. What men do you suppose could get efficiency out of any work with that state of affairs in existence?

We see now great improvement, having paid our labor up to March 1st and gotten rid of construction forces and our men on west end are doing better. We lose now very little by thieving, our depots are not robbed daily, our cars broken into and our trains ditched; we run on time smoothly and the two new division superintendents west are doing well. As soon as we can get Chinese labor instead of Irish we can reduce cost of labor 50%. I think we can begin to put it on in July. I see no difficulty in getting at our indebtedness daily, if needed. By looking at Snyder's statement monthly returned to you, it shows exactly his indebtedness. As to contractors I know nothing about it except what Kenedy said. I heard him say he could tell it at any time and he gave Dillon an abstract of it. I do not agree with Duff about the running department of Road only at West end. East end of road I say is in far better condition that 99 out of every 100 men would have had it under similar circumstances, and you better come out and compare it with any road east here, take north-western, C.B. & St. Jo or any road that runs on full pay and ours will compare favorably with any of them. I take no assertions of Seymour or Durant as to running condition of the road or as to men on it. I look up the matter personally and I know what I am talking about. Their objection point was to kill everybody on the road whom they say had to fall. I ask you if these matters were so bad why did Durant, Seymour & Co. allow them to remain? They were out here, had full authority, but neither said a word unless they became satisfied the running department could not be used to forward their schemes and that their pets could not hold position in it. Now I want the charges against the running department put in white and black, and I want the men to have a chance to answer them. I now want Snyder, Congden, Stevens and the heads of Departments to have a show untrammeled, a fair field and let us see what condition the road will be in. I know that they are not perfect, but I do not believe any men could have done better. I believe them honest and true to the road's interests. Very few would have stood what they have.

As to reports, you get daily report of earnings, monthly abstracts of expense and business and everything can be made weekly if you order it, but the accountant says it will take extra labor. It seems to me, daily report of earnings and monthly report of expenditures, purchases, condition of road, &c. is all that you require. The system of accounts out here are the same as on C.R.I. & P. and other roads, only they are much fuller in detail on U.P. Won't you explain to Oakes Ames that I have nothing to do with payments, settlements, measurements or estimates of contractors. I have no means of obtaining any information from them; they have and now do keep studiously from me any information. Whenever these engineer books and papers are turned over to ~~me~~. I will endeavor to have all work remeasured. I know of no man who could do it better than Blickensderfer; he located line and understands it. I have worked here since April 15th to stop the masonry on road and get up our bridges but as yet I cannot succeed. I enclose telegrams received yesterday. If I understand rightly, most of the contractors have got their vouchers, or basis for settlement was fixed on, while D. and D. were out there. All material belonging to company is piled at section Houses or principal depots. That scattered along the road belongs to contractors, and as soon as you get ready to sell it, or otherwise dispose of it, you must put it in charge of the purchasing agent here and have him advertise it in Chicago and southern

We would have no surplus

papers. So many roads are being built that large amounts of it can be disposed of if it was only known it was for sale. As it is now, no one has any control over it, knows what it is worth or how it is to be disposed of.

Material on hand. I have written of this before; of material needed for the road you have no great surplus. \$1,500,000 worth of material of all kinds so far west as we are for 1086 miles of road is no great amount. If you think so, see what some roads keep on hand, and how did you expect any person out here to stand up and stop purchasing agents orders? The orders were to buy unlimited supplies, to be ready to furnish construction account any amount and any kind, and we all know with what looseness such orders were given. Frost, Reed, Evans and Snyder all tell me that if they had observed the orders they would have had twice as much as they have. If purchases had been stopped last fall right, but then we were going to build to Humboldt Wells; if we had our material would be short instead of surplus. The material that you have which is not needed is that used in the construction of a road. It was supposed those in charge knew what they needed, not that Frost or Snyder knew when they were not present and even if they did they could not help it. You want to come out here and look for yourself. As to Congden, I looked upon him as a No. one man. I judged it from the condition of his machinery, out of 147 engines we now have only 12, out of repair, and this after a terrific winter and springs work. At Cheyenne we have spent \$90,000, have the 20 stall round house completed, the Blacksmith shop up to windows, the machiner shop has foundations in; it will take \$125,000 to complete all of it. I shall complete Blacksmith shop first. West of Rawlins I think nothing but blacksmith shops should be put up; one end for machinery, the other for forges and three 10 stal round houses, one at Bryan. one at Wasatch or Piedmont and the other at end of road wherever it may be.

I fear Warren will not accept the 86 miles. I see by their report that they bring in \$87,000 to change line back to original line on this unexamined portion; that they adopt the 80 ft. line over Promontory. We are built on a changed line of 10 curves and 116 ft. grades, and I cannot see how Warren, to be consistent, can now say it is a first-class road. If he objects, I will ask him to state what amount should be retained to make it first-class, and recommend its acceptance.

Now, I have been over all these subjects before. You are as much at sea out here as ever. Men are unpaid; I have raised here \$100,000 on my own personal security. Snyder has raised as much more, and we live along from hand to mouth. If I could get \$350,000 I would agree to carry the running department. We can float a million easy but we cannot float four millions with our labor unpaid. The contractors out west talk of raising mobs on us, stopping trains, and you see the condition of matters by dispatch I enclose. My way of settlement is to order the construction outfit to Omaha to make its settlements, get it away from the line of road, draw the sub-contractors down to this end, where we can handle them, now at Echo, they are just where we dont want them.

Make arrangements for fare and freight with Central Pacific and we can run in, but as we are now we are losin' one-half of our business and the good season is passing away."

On May 30th, Mr. Caleb Cushing, one of our Attorneys in Washington wrote me in relation to the statements I had sent forward to be presented to the Interior Department, as follows:

Washington, May 30th, 1869.

"By direction of Mr. Chandler, now in New Hampshire, his clerk brought me your letter of the 24th for answer. Copy of my letter to him of same date explains the actual status. Although no necessity exists now to file papers showing road done since February, it might be well to have them here to send the President on any adverse movement or tendency of the Government.

The report of the Commissioners has done much to quiet Snow's calumnies of the Union first, a proving that the deficiencies of the Central are relatively greater than those of the Union; and secondly, in forcing them to consider how vast is the work and under what difficulties done by both companies and especially by the Union. At the same time the tone of the press is generally becoming or tending to become more candid and appreciative more patriotic and self-congratulatory more respectful to the authors of the greatest of all the enterprises of the United States.

You will see that the Commissioners give prominence to the operations of your location over that of the Central."

1869

On May 31st Mr. Wm. E. Chandler, another attorney, wrote me the following letter from Concord, New Hampshire:

"I left Washington Thursday night. The Central people are cross and uncomfortable. 1st because the report pitches into them, and we did not, they think exert ourselves as we ought to soften it down. 2nd. Because they can get no bond on favorable terms. 3d because the U.P.R.R. dont carry out their agreement as to the terminus near Ogden. Gen. Warren will give you the details as to how matters progressed. The Central people think we might have influenced him and Blickensderfer if we had tried. I didn't try much first, I wasn't told to, and second I didn't see any chance to change their opinions if I tried, so as I told you I waited the progress of events.

Secretary Cox was determined when I left to make the Central alter their location as reported and they were determined not to do it nor to deposit four millions of the first mortgage bond. The telegram of yesterday reported that they had made arrangements, what it is I cannot imagine; getting angry they may have tried to corner the U.P. by putting up four millions and saying to the Secretaries "there are our securities now make the Union put up six millions of their securities." But

Secretary Cox told me they would do nothing until your affidavit arrived, and Gen. Conkling is looking after the business with care. As to getting bonds, if any are delivered before the citizens examine the delivery will be one million to the Central. If they do not get that, it is of no use for us to try. If they do we must press also.

I trust your affidavit goes to show what has been done to supply the deficiencies on the U.P.R.R. Huntington's affidavit is disingenuous in undertaking to apply iron for a new road to a deficiency on completed road. Your affidavit should show, first, what has been done second the date of examination to supply the specific deficiencies reported, stating or estimating the amount in detail in dollars. Second, what has been done in the way of work and expenditures since examination- not to supply deficiencies- this, however, to be separate from the other items. Third, you should state and argue against the necessity of some of the items reported by the Commissioners. This should perhaps be done in a separate document from your affidavit and should proceed with item by item making such favorable suggestions in behalf of the company as you may be able. If you do not do this I am afraid it will not be done by any one. If you have sent forward only part of what I have stated, please send supplementally the balance and telegraph Secretary Cox that it is in preparation or on the way.

I do not find any one East connected with the road who is familiar with the construction or equipment details of the roads interests and that the argument as to the terminus at Ogden as impracticable, injurious to the Company, &c.

As to that agreement, I understand the board agreed to await payment by the Central before fulfilling. I notice a disposition all round to represent it as a mistake and to get rid of it if possible. They ignore first the disadvantage at which the Central had us; second the actual condition of the work when we agreed; and third, that the Central would have at all events have laid a track to Ogden; fourth- the advantages secured by us in the agreement. I do not see how I can be a party to violating that contract, and if some arrangement is not soon made to carry it out the Central will soon build a track to Ogden.

I will continue to write you but please be careful with my letters as they are confidential and personal to you.

I shall be at Boston frequently during the month; was at the office yesterday and saw the Messrs. Ames, Duff, Glidden and Williams. Mr. Wade and Painter left for Washington yesterday. I do not know how the new organization at Boston will work. Mr. Duff is going into the business, but a new office must be taken, new books, opened, &c. They seem to think all can be done in Boston, and I do not learn that any particular person has been assigned to the executive work in New York. The Executive Committee consists of Morris, Ames, Bushnell, D. Atkins, Dillon, Kidder, Brooks and Duff, and they meet on Tuesday. I think there is need of one Executive manager in New York capable and willing to take some responsibility; however, this necessity depends largely upon the way the business is done by the Superintendent. If he goes ahead with the business of moving and you go ahead with closing upon construction, taking responsibilities, there will not be need of referring many questions of detail to the President or directors. I noticed yesterday letters from Mr. Snyder to Mr. Ames asking instructions on some matters of detail that I thought he might with propriety decide himself. I think you should go on and direct matters as far as you can at Omaha, and save the necessity of deciding executive questions at Boston. But I do not exactly understand what are to be your own relations to the road. In addition to Chief Engineer ought you not to be managing director of Genl. Superintendent at Omaha? I judge from some remarks let fall that the Directors looked for some arrangements to the general superintendency different from that now existing. Don't they think Mr. Snyder fully up to the mark? If you should take charge of Omaha and a Director could be assigned to duty in New York the business would go along prosperously. But it's a great road to manage for Boston, although it is the hub.

I saw Durant and Brooks in New York. They are a little chagrined although apparently self satisfied. They don't believe the road can be managed in Boston. They denounced without stint the agreement ~~firing~~ the terminus at Ogden, as incomprehensively injurious to the company, &c.

Please write me briefly your plans with reference to the future management of the road, organization, &c. as I want to promote your views to the utmost and cannot do it unless you speak freely. If you will tell me what you want without giving reasons for it your letters will not be long.

You need a land or emigration department at once.

Yours of the 25th just at hand. You had better write unofficial letters relative to the road to the President, Rawlins, Bushnell and Cox if you can get time, if not, all then to the President and Cox.

We just learn that the Central have deposited four millions of first mortgage, and received \$1,700,000 of U.S. Bonds. I see no objection to this, but will think it over."

1869

On May 31st, Mr. Snyder wrote me the following letter from Omaha:

"Mr. Price reached here Sunday morning; went West Sunday P. M. I had a long talk with him. He is straight as a lion and has nerve.

I want Duff to understand two things- first, T. C. Durant knew of my bargain with Wendell, was told of it at Bryan a week before any money was paid; said he could not authorize me to pay the money but if in my position he would pay it. I told him that if he said "No" I would not pay a cent. T. C. Durant knew all about the affair; knew when the transaction was to be closed and a word from him would have stopped it; he approved my action by saying he would carry out the arrangement if in my place, yet tells other directors that he knew nothing about it and holds up his hands in horror at my actions. This is simply on a par with his other transactions.

Second. Frost. Mr. Duff thinks I ought to have discharged him long ago; granted, but O. Ames and S. Dillon in talking about him said it would not do as it would raise a row with T.C.D. Under these circumstances, I held on to Frost not because I wanted to but on the suggestions as above. Price gives me these two points confidentially. I would like to have Duff posted without bringing Mr. Price's name up in the matter.

I get no financial help from the East.

I send Dillon a newspaper by mail this P. M. from A. Boody stating that H. Chittenden, dis charged last year from N.Y. Central, is the man for Genl. Supt. here. It is probably in reply to inquiry from Dillon.

If they want Chittenden I would like to have them get him soon. I am very sick of this outfit that talks so much about cleaning out thieves and yet waken when in the presence of the thieves, and will let thousands be stolen under their own eyes while looking after old plows."

These letters only show that Durant was still desirous of making mischief and attacking the company although he had been left out of it entirely.

I have explained the Wendell matter heretofore. The Company got the benefit of it at the time Durant approved it and he also approved an agreement I had made with the Central Pacific to sell the road from Ogden to Promptory. When he found that the Central Paicific had obtained bonds over a portion of this road, he was ready for any kind of an agreement, but I cared nothing for his criticism as all our troubles and all our bad bargains, if any, had come through his own work and interference.

On June 2nd, <sup>1869</sup> Mr. Oakes Ames wrote me as follows in relation to the raising of money and the election. They were all beginning to appreciate what the conditions on the road were, which I had been notifying them of and predicting for a long time: We had eliminated the cause after the horse was stolen:

North Easton, June 2, 1869.

"I have your letter of recent date for which I am obliged. We are working every way we can to raise money to meet the coupons maturing July 1st, and the debts cut on the road, it seems as though there was no end to the debts due out there, and at Omaha, Chicago and at other places and New York, the lawyers will eat us all up at the rate they charge in Washington and New York; and instead of getting money from the earnings of the road they are constantly calling for money from here to aid Snyder in paying his men to run the road.

We have got to change our policy and practice more economy and prudence, or we shall never make our road a paying road. We here in Boston are economizing in every way we can, and if we can ever get out of the hands of the thieves, swindlers and lawyers in New York and a prudent economical honest administration of affairs on the line of the road, our stock may be of value.

We hav had our annual meeting, but Drs., Durant and Fisk did not make their appearance because we omitted Mr. Bushnell and McComb from the Board and Bates refuses to serve on the board and we shall probably have to put some one on in his place. John R. Duff was put on the Board and was to remain to organize and then to resign and have you put in his place at the next meeting of the Directors.

We must make some differnt plan about free passes or we shall get no room in the cars for anything but dead-heads. Has Casement been charged with the ballasting up his track which he left for us to do? I am afraid we are being cheated all the time out there in measurement of work, and in number of ties and quantity of timber.

I hope that you will have everything measured up and see that we do not have to pay for work that we have not had and let us get everything settled up as fast as we can and see where we are.

N. B. You must take care of the 5 eminent men as Commissioners when they go over the road. I intend to go out to Iowa and over to Omaha as soon as we can see our way clear for funds to paye coupons."

I had written my friend Hon. James H. Wilson in relation to Winslow who was on the Walbridge commission, and he wrote me from Keokuk on June

<sup>1869</sup>  
2nd as follows in relation to him:

"Yours in regard to Winslow has just been received. I know him so well and take pleasure in saying that I believe him to be an incorruptible honest man, but an entirely fair one. He is a practical railroad man, well educated, intelligent and active and will therefore be very apt to see and look into everything that his duty requires of him. He was here day before yesterday and spoke of his appointment as one of the "eminent civilians" and of his determination to do "equal and exact justice" so far as he could. My ~~no~~ motion is that he will not be disposed to exact anything unfair or illiberal from the Company. I will take pleasure in writing him at your instance. His address is Davenport."

I was very anxious to have a fair commission which would give us full credit for all the work we had done since the examination of the Blickensderfer commission,

<sup>1869</sup>  
On June 4th, Mr. F. S. Hodges, one of our engineers sent me the following letter in relation to the work and gave me information which I had been looking for for the purpose of making a correct estimate of the work the contractors had done as called for by the Company:

Boston, June 4, 1869.

"Assuming that you propose to remeasure the work from Black Hills West, I take the liberty of stating a few facts and which I have said before, personally, or which you may know.

The only engineer who kept a complete record of cross sections was Capt. Bates. He showed me his books, they had every cross section on his works platted (taken at every station or oftener when necessary) throughout his division, and on the same pages his calculation of amount of Esc. and Emb. His extended work, Devil's Gate Slide, &c. was on Cross Section paper which he told me cost him \$50 to procure.

I suppose that Capt. Bates has them yet, as probably Mr. Reed or other superior has never called for them, and I think that, by care, Capt. B. might be induced to give them up.

On the Nounan contract, (28 miles) young Bigelow told me here a few days ago that he, B. had every cross section. B. was Asst. under Lawrence. I think that Seymour and Bates were interested in said contract. Kiskadee offered Lawrence an interest in the coalville mines, I understand if he, L. would make certain changes in the classification the point on which I suppose this suit of Nounan hinges.

You will pardon me for troubling you with such statements but it seems to me that such knowledge is beneficial to the company. If made to the direction here, it would go in one ear and out the other and as they don't seem inclined to desire information of this kind, I infer that they rely on you to be cognizant of all western items.

I am temporarily engaged in the U.P.R.R. office here. I expect to remain long enough to get thoroughly acquainted with all the routine, and if everything works successfully and harmoniously, I shall next year probably solicit at your hands some position out there.

I never liked engineering, though it appeared to me that you thought I got along at it.

I hope to do much better in some more suitable department and success in which would be the only object I aimed at."

1869

On June 6th, Mr. F. S. Hodges, one of the Company's engineers wrote me again from Boston giving me the Boston views of matters, as follows:

"I addressed a short note to you two or three days ago. I believe that it is for the true interest of the road that you know these facts as well as what I shall write below.

I may be accused of presumption in having any idea of the true interest; of violation of confidence in stating what I have learned and of the loss of all future chances of promotion through fear that I might hereafter leak as well as now. But I have heretofore kept my mouth shut to all, and as a result I find that others who have talked a great deal more have gotten ahead of me, whom I am egotistical enough to think could not excel in other respects. I may be wrong in thinking such a course towards one whom I have thought ~~not~~ adverse to me, was to my own interest. If so, I take the chances, but I shall attempt at the same time to serve you, and, I believe, the company, without at any time transgressing on the etiquette, which the difference in position renders due you from myself, and feeling that I am not subject to the charges which I have just before mentioned.

Matters in Boston are moving along. But the present organization lacks nerve in its executive affairs. They are so taken aback at the position of affairs that like McClellan, they are deliberating on which flank to strike. Huntington and Crocker were here yesterday. Tried to adjust rates. The Council came to no agreement. Our folks want 07 cts. per ton per mile, right through the whole distance. The C.P. though (on the basis of collecting from Sacramento to Ogden) don't like to go pro rata. They say they don't think it just that they should get \$52 to our \$72 and a half. But I believe would agree at that pro rata, provided that tickets should be sold all the way to San Francisco, and by their western R.R. only. They are afraid of the competition of water or otherwise from Sacramento to San Francisco.

They also talked of selling the road to the C.P. from Promontory to Ogden. C.P. wanted to pay a certain sum down, and take the road now, paying the balance when adjusted. It seems to me that a trade ought to have been made in half an hour. Now the C.P. talked always to the spot, with Huntington as keen as ever. He staggered them by saying that he already had your affidavit that the road could not cost over \$15,000 per mile; at this Crocker laughed out right and I could not help smiling to see such effect of this bombshell, though annoyed that no one there knew enough of the circumstances to reply that Mr. Huntington himself swore that it would cost over \$50,000 per mile to grade.

Huntington struck out several times like this without being warded off. Mr. Duff is Vice President and is on every Committee.

He don't seem to think much of engineers, judging from his remarks. Said, that their "professional pride" had cost the road 3 or

4000 dollars, &c. Col. Seymour has resigned, and got over-paid three months, but his bills are not all settled. His statements against you, have seemed, at least, to have had the effect on Mr. Duff to have a little uncertainty as regards yourself. Mr. Duff is pounding away every day at Snyder and evidently intends to oust him.

Snyder ha d better be left, I don't know which will win before the entire board. Two or three of the Directors have questioned me about him. On the strength of your recommendations I have spoken as strongly as

I could in his favor. Personally, though acquainted with him and his wife for about ten years, my associations have not been such as to judge very satisfactorily, but I know, as I have said frequently, with Durant out there to upset all organization, the Angel Gabriel could not run

the road to every one's satisfaction. That I don't believe in the policy of kicking out all the old hands after they have, as I am personally aware, suffered exposure, hardship and danger and stuck to them not only through this, but through great personal indignities and accusations, In my poor judgment, there is first required right here at headquarters a management of great sagacity, ability and railroad experience. Perhaps they know a man outside of their management whom with no interest in the road itself, they will send out and entrust everything to! I dont."

1869

On June 7th, Mr. S. S. Montague, the Chief Engineer of the Central

Pacific, wired me to be at Promontory Point on Wednesday evening for  
Mr. Montague was a very fair, conscientious man, and we had no trouble in adjusting  
any difference that arose, and if C.P. had left them and U.P. to me all their claims  
consultation. The Company were very anxious to get a portion of their

bonds released, which were being held for the insurance of the completion  
of the road in accordance with the Blickensderfer report, and on May 7th

Sec. of Interior,

I wrote the Hon. J. D. Cox from Council Bluffs, giving the total amount of  
expenditures made by the company to bring the road up to the specifications of the  
committee.

"In showing the amount of money expended on completed road east  
of 1035th mile post since examination of the special commissioners, we have  
confined the statement of the expenditures to the items reported as  
requiring additional expenditures by the Commissioners in their previous  
report, supposing they would adopt in their recent report very nearly  
the same basis. we have added items where we considered the expenditures  
applied to construction account, and we submit the affidavits of S.B. Reed  
Superintendent and Engineer of Construction and Webster Snyder, General  
Superintendent of the road, under whom the expenditures have been made,  
and they have made it up from the official estimates upon which the  
payments were made and are as follows:

Amount expended by S. B. Reed, Supt. & Eng. of Construction - - - - -	\$ 998,848.55
Amount expended by Webster Snyder, Gen. Supt. U.P.R.R. - - - - -	1,222,954.11
Amount locomotives, Cars and Bridge material on hand - - - - -	1,373,474.69.
Amount rolling stock contracted for - - - - -	677,000.00.
Total - - - - -	4,272,277.35

#### Location.

The slight changes required in location in former report of  
commissioners hardly requires mention. The change in original location  
made by Construction engineers west of 890th mile post, were made generally  
with a view to keep away from high water and west of Weber River the chang-  
es are where grade is light and the change does not increase our grade or  
curvature and therefore does not materially injure the running of the road.  
The original location is no doubt best, but when change is so light, I do  
not consider that the Government should retain any sum to insure change  
of road. Around Clay Bluffs where change is most detrimental, as soon as  
high water subsides, the original line will be put in.

#### Road Bed.

When built in winter, the earth had to be blasted and the road was  
necessarily rough. As soon as the frost went out large forces were put  
to work with gravel trains and steam shovels, and it has now brought up  
to line and fully ballasted. The heavy work at Head of Echo and tunnel No.  
3 is now fully completed, the temporary tracks abandoned, and the road is  
over on the adopted line.

#### Ballast.

All the road west of Piedmont has had gravel trains at work on it  
and heavy forces of section men on it until now it is almost fully ballasted  
and the road bed is brought up, the track relaid so that we run safely  
over it at Twenty-one miles an hour.

#### Bridges.

Since the commissioners examined it, all bridges over Weber have  
been completed. The Howe Truss put up and the temporary trestle taken  
out, except two, Devil's Gate and Strawberry Ford. At Devil's Gate we have  
a Howe Truss in which we are replacing by a 239 ft. span combination  
bridge (Iron and wood) and at Strawberry Ford the Bridge Gange ~~ane~~ now  
erecting the Howe Truss, so that within ten days both bridges will be  
completed. At Bear River, first crossing, masonry is completed and the  
Bridge on the ground and being raised. At second crossing, the combination  
bridge, iron and wood, single span, is on the ground, and will be raised  
as soon as the bridge men complete Strawberry Ford Bridge over Weber,  
completed since last fall, will be up. All but three are raised and  
being run over, and the three are upon the ground and two mostly completed.  
The affidavits show the amount of work done on this item since the road  
was examined.

Equipment.

The affidavit of the General Superintendent shows an increase of rolling stock on the road since examined and amount now under contract and I desire to call the attention of the Secretary to the fact that we have now hundreds of box and flat cars lying idle on our side tracks and have had them ever since the demand of construction ceased. We have now cars ample to do any and all freight business that will come to us for a year or two. We have power more than sufficient to do all the traffic and repair of the Road with engines lying idle, and I submit if it is either good policy or economy to the Company or what the government requires that we should increase our rolling stock to stand on our tracks to rust and rot. Where the business of the road demands additional motive power or rolling stock, it seems to me that government needs no security or guarantee that it will be furnished. It is a plain, simple problem that the Company will, now the road is completed, furnish ample facilities for travel and transportation and I assert that no road gives better accommodations in its cars or the quality, in its time, or in the safety with which travellers can go over it for the same length and in the same time. Our expenditures for stations, tanks and shops the last two months has been large, and are continuing as the affidavit of the General Superintendent will show; we now have far more shop room than we need. During construction our shops at Omaha, North Platte, Cheyenne, Laramie, Rawlins and other points were used to their full capacity for contractors on construction work, in the manufacture of all kinds of machinery, bolts, &c. that has now stopped there being no further need for it, and now our shops are not used to one-fourth their capacity; we have, however, put up machinery at Bryan and Wasatch, and are preparing to build our round houses over that portion built in winter, by fall our full compliment of round houses and shops will be built. Could we distribute the shops now on the road, there would be no further necessity for additional ones for a long time to come.

In conclusion I desire to say that our expenditures have reached millions on account of railroad, iron, some seventy to one hundred miles of which are now on hand; surplus tools and almost everything that could be used in building additional road, to the amount of at least five hundred thousand dollars, and the surplus in the construction department at Echo will reach nearly another million. There are also some 400,000 to 500,000 ties and a very large amount of lumber and bridge timbers of all kinds, now out lying in the timber or on the streams being floated to our line by the Laramie, North Platte, Green and Bear River, which is not put in the estimates as it has not reached the line yet or estimates have not been returned for it to the Superintendents. There are enough ties to replace every Cottonwood tie in the road now and as fast as they reach the line of road are being used for that purpose. Our wooden trestles and pile bridges many of them will outlast any Howe Truss and are the same as are used on all American roads, they are well put up of the modern plans, strong and perfectly safe and would not require replacing for ten years. Dale Creek Bridge cost the company \$200,000 and will last twenty years, is very strong and safe and would be counted a first-class structure. I can see no good reason for replacing such structures at present, but when the necessity, from long use, requires their repair or replacement, then stone and iron will be used exclusively, as it is the true economy.

In submitting this statement, I assure the government that their desire to make the road permanent is no more than the determination of the company that it shall be done, and I assert here that so far as safety is concerned, there is no road in the country that runs smoother or safer than the Union Pacific Railroad. That it should be perfect, the day completed, no one could expect. I know of no road in the United States completed today. Construction and repair accounts on every road is one of the large items of their expenditure and especially when the last 540 miles of the Union Pacific R. R. was built in twelve months, it could not be expected to immediately reach any such standard as that adopted by the Commissioners but that it is more complete and perfect than any new road ever built, we do assert and as evidence, State that our trains commenced running to Promontory Summit the day the last rail was laid, and that they have run from that day to this regularly on time, and made promptly the connection with all eastern roads, and that since completed we have bent all our energies to replace what was lacking, made heavy expenditures and are continuing to do so, and now the amount required to bring the road up even to the standard required by the commissioners, is comparatively small.

-976- 976

I, Webster Snyder, General Superintendent of the Union Pacific Railroad, being duly sworn, do hereby depose and say that the following is correct statement of material which the Union Pacific Railroad has now on hand for future use, to wit:

For Locomotives,	\$663,941.75.
For Cars,	613,471.15.
For Bridges and buildings	96,061.81.
	<u>1,373,474.69.</u>

(Signed) Webster Snyder.

Subscribed in my presence and sworn to before me this 29th day of May, 1869.

(Signed) George Armstrong,  
Clerk Supreme Court of Nebraska.

(Seal)

I, Webster Snyder, General Superintendent of the Union Pacific Railroad, being duly sworn, do hereby depose and say that the following is correct statement of equipment now under contract to be delivered to the Union Pacific Railroad in June, July and August, 1869:

15 Locomotives	@ \$15,000 each	\$225,000.
24 Passenger cars,	@ 6,000 each	144,000
22 Sleeping Cars.	@ 14,000 each	<u>308,000.</u>
		677,000.

(Signed) Webster Snyder.

Subscribed in my presence and sworn to before me this 29th day of May, 1869.

(Signed) George Armstrong,  
Clerk Supreme Court of Nebraska.

(Seal)

"I, Webster Snyder, General Superintendent of the Union Pacific Railroad being duly sworn do hereby depose and say that on Ten hundred and eighty-five (1085) miles of road examined in February last by the Commissioners appointed by the President of the United States, there has been expended by the Union Pacific Railroad company under my supervision and separate and distinct from expenditures made under supervision of S. B. Reed, Superintendent of Construction, since the examination to May 27th, 1869 as follows:

For completing embankment to full width, ballasting readjusting track, surfacing and curving rails	\$530,583.79.
For new ties to replace Cottonwood	72,480.00.
For new bridges	27,333.15.
For shops and fixtures	112,971.96.
For new tanks and depots	48,733.12.
For snow fences	19,744.94.
For new locomotives put on road, 9 @ \$15,000 ea.	135,00.00
For new Passenger cars 2 1st class @ 6,000 - \$12000 2 2nd " @ 3,600 - 7200	19,200.00.
For new Caboose Cars 6 @ 15,000	9,000.00
For new baggage and express 2 @ 2,500	5,000.00
For new box cars 190 @ 900	171,000.00.
For new coal cars 66 @ 725	47,850.00.
For new hand cars 20 @ .75	1,500.00.
For new powder car 1 @ 900	900.00.
For repairs on locomotives	21,657.15
Total	1,222,754.11

Nine (9) construction trains and two (2) steam excavators are constantly at work completing embankments and suffacing track. Depots, ample for the business of the road, and water tanks with capacity of twenty thousand (20,000) to thirty thousand (30,000) gallons each are erected at all stations and good dwellings for track laborers on all sections of six (6) miles each on the entire road.

The equipment of the road is as follows:

Locomotives	147.
Passenger cars, 1st class	23.
Passenger cars, 2nd class	13
Sleeping Cars	12.
Baggage and Express	20.
Box cars.	942.
Flat cars	1419.
Coal cars	231.

Hand cars	264.
Bridge Cars	13.
Gravel cars	2.
Derrick Cars	2.
Wrecking cars	1.
Rubble Cars	13.
Dump cars	47.
Powder Cars	2.
Cooking cars	1.
Pay Master's car	1.
Officer's Car	;1.
President's car	1.

The locomotives are all in good condition except twelve and there will only be required slight repairs for them. There are enough locomotives to do all the business offered the road and more than are absolutely necessary for the Passenger, freight and construction trains.

The passenger coaches, baggage and express cars are amply sufficient for all the present requirements of the road.

More freight cars are now on hand than are needed for the prompt transportation of all freight offered. Part of the equipment of the road is at present idle.

Four (4) passenger coaches, costing seven thousand dollars (\$7,000) each and four (4) Baggage and express cars, costing twenty five hundred (2500) dollars each are now in course of construction at Company's shops in Omaha, and will be completed June 20th, next.

(Signed) Webster Snyder.

Subscribed in my presence and sworn to before me this 29th day of May, 1869.

(Signed) George Armstrong,  
Clerk Supreme Court of Nebraska.

(Seal)

This report shows what we had spent and had on hand material for over \$4,000,000 and on this statement the Secretary of the Interior released some \$2,000,000 of bonds which was a great relief to the company.

On June 10th I received a dispatch from General Warren of the Commission in which he said: "We are getting along nicely."

I went out to Promontory and met Mr. Montague, the President of the Central Pacific. The two companies had had disputes as to trackage, sidings, etc. which we very amiably settled. I found Mr. Montague anxious to be fair in everything and to do everything to help along the operations of the road.

While at Wahsatch, on June 14th, I wrote Mr. Ames the following letter:

"I am in receipt of two letters from you, in one of which you intimated that in some letter I had charged you with fraud. I cannot think what letter you refer to, as I do not remember any such language and I know it never entered my mind. It must have been in a letter in which I said New York was to blame for our trouble out here; if you have any doubt of that, you had better come out here and see the orders and instructions that have been given from New York, and I do not hesitate to say that all our troubles and all our losses are due to Mr. Durant or his orders. As I have heretofore said, engineers and subordinates cannot be charged with these matters; they were powerless in most things and the worse reputation a man had, the quicker he was employed or given a contract, and you are aware that engineers were kept on construction after I had discharged them and notified the company officially that they were not trustworthy. Mr. Evans I believe

to be honest; he had no interest in masonry; it was put in against his protest by direct order of Mr. Durant, and he says, in just the shape ordered for the purpose of avoiding cost and making it pass muster. He, unfortunately, I think, after taking a contract, remained as an engineer at the urgent and repeated requests of Durant, he, the Dr., stating it would save him trouble, and Evans was merely to see that the work was pushed. I know he took charge against his own views, and, as he now says, made a mistake. The two bridges that he gave personal attention to are good work, those he trusted to subordinates are worthless, both in stone foundations and work. Although it is no excuse for the mason to plead that his work was accepted, yet it has not been usual to keep an inspector on work all the time. Now, the small amount of masonry put in by Evans that is bad, amounts to nothing compared with that put in under Reed and Seymour, as Seymour, I am told, directed work on Noonan's contract and got it accepted, three large piers and all the bridges on Sulphur Creek, each of which has double the masonry that any Bitter Creek Bridge had, has gone to pieces. What astonishes me is that how, today, you are paying \$27 1/2 per yard to put in the masonry at Devil's Gate, Ogden, Bear River and other points, when I can get better masonry done for \$12 1/2 per yard, right here on the ground. Are you tied up by a contract? If not, then stop the leak. I could stop a hundred here today had I the power. I have assumed a good deal but it won't go down long.

I uphold no man who has wilfully wronged us, but when I stood here all last summer and heard time and time again orders to do things which I knew were wrong, and which the men when they received them protested against, and when I came back and hear Durant tell Duff and Dillon that Evans and Reed are at fault for doing the very acts he orders, which I myself heard, I do not believe one word I hear until I prove it. Now, Evans is honest, was faithful to you, how work is the best and cheapest, his papers in best order, and under him the work went smoothly, systematically and had he been placed in charge last fall of work west of Aspen and Durant had kept away, your track would be fifty miles further west, and it would have saved us millions, but he would not continue because he saw what was to be <sup>the</sup> outcome. Durant then ~~let~~ the bridging, truss work only, no masonry; then allowed himself to be put in charge of masonry to clean up and instead of giving it his attention as he should have done, he attended to his bridge contract, and states, positively, that his charge of masonry was merely incidental. Let us meet all these cases squarely and give each his due. I can better give you an idea of how men are changed here by stating what I know. You remember the coal contract made last year. Well, Durant came out here after it was made, denounced it to me, to Snyder and gave Snyder to understand that he was to pay no attention to it. He, Durant, then went himself and made contracts, or ordered others to, with Hall, Morrow, Vandyke, Gessner and others for coal. Now, when Duff and Dillon were out here, I heard Durant denounce Snyder to them in the bitterest terms because he, S. has not carried out that contract and I was led to believe that Duff and Dillon believe it. I said nothing about this as Duff informed me that Snyder would be brought up on it and I wanted him and Durant brought face to face on it.

Before you come out here make a note, as I do, of every complaint you hear on road and probe it when you get here without saying a word to any one, and you can get at the facts, that is the only way. The supply question is the same and so is everything. I would like to have you see Reed's orders, Frost's, Evans, Snyder's, &c. and I am inclined to think you would open your eyes. We have ~~picked~~ up on side of road whole car loads of construction supplies reported lost on books, when the fact is, they have been neglected until some thief, through some rascally conductor or agent would rebill them, forge marks and have them delivered to some other person and away they go. I got track today of a large amount that went to Salt Lake.

Bent has a charge against the Company of \$100,000 of overcharges on his supplies. I looked at his bills today and at our books and find him charged nearly doubled prices. Now, who got the profits? Again, I see bills of groceries brought out here all winter long for less than prices as bought by Frost in New York or Chicago. One of two things is certain, parties out here stole supplies or else Frost paid enormous prices. This is not uncommon but was of daily occurrence, and in settlements now, company men and contractors show their bills to this effect. We have lost most of our money by Co. work, by Co. agents, in our supply Dept. in false rolls, in double prices for teams that laid still in movement of material when it was not necessary; perhaps some over measurements or wrong

classifications. The instance cited to you on Promontory is sufficient to show you how rotten Company work is. We can never remeasure this work until we can get the full cross section notes, and I am inclined to think that you will find very little over measurement; from Promontory east to Ogden I had a good check, as before work was opened I estimated it at, so did Elickensderfer, and the quantities are even smaller than we made them. Up Weber and Echo and over Narrows, on Aspen Hill are points easily over-measured and if ever I get at notes, I shall remeasure it all.

When Huntington settles with you, quote Montague, his chief engineers, affidavit, on work between Promontory and Ogden. He will probably quote me in my affidavit which is all right between Monument Point and Ogden. We are very close. Grading, even at the prices you paid, will not cost, over that ground, much over \$15,000 per mile. From Promontory Summit east the cost is heavy as it cuts off 27 miles of light work and puts all heavy work within fifty miles. Their grading between the two points mentioned, when they made their affidavit was not one-third done.

I have gotten letters in answer to several written to ascertain about the standing of new Commission We Think most of it is good. Comstock, Winslow and Boyd are honest and competent railroad men and cannot be swayed; they have minds of their own and all have experience. From Rawlins and others at Washington, I hear things which indicate to me that Brooks should go out. I dont believe he is a friend to us now; he may be but I doubt it.

My opinion is that C. P. Will endeavor to get our road for their price, failing in this, will build themselves to Ogden, claim rehearing on line question and claim that we filed one line and built another. If you do fail to agree, that moment issue an order to me to take our line over Promontory to 80 foot grade. See now that our line is accepted to Summit and make in writing to Central Pacific proposition to sell at cost, stating what it is and say you are ready to turn it over the moment they pay for it. Be careful in this matter to keep your record right, make it in writing because the fight will change to Washington. Cox, Hoar and Boutwell will decided, or a majority of cabinet will, that main line commences at Omaha. Central Pacific know this and dont want all deficiency to fall on them. It will cut you out of part of Government bonds. You want to base you action with all this in view. If we fail to agree put down rates immediately and make a fight right in San Francisco for travel and freight. Their proposition to divide equally is a mere subterfuge; they are not honest in it, they are bluffing and know you would not give it. I would pro rate just as low as they would."

We were having a great deal of trouble with the Central Pacific on the question of rates and of running the road as one continuous line in accordance with the charter. The Central Pacific seemed to consider their road as an independent concern, entitled to more per mile than the U.P. and a larger differential, while we were demanding a mileage basis.

On June 18th, <sup>1869</sup> I received the following letter from Oakes Ames who was interested with Mr. Blair in Iowa and was going over the road with him:

Cedar Rapids, June 18, 1869.

"I am at Cedar Rapids and go up to Sioux City today and back tomorrow. I hope to be at Omaha Sunday and would be happy to see you there. Mr. Blair will go there with me. I may go to Fremont with him and back to Cedar Rapids, and go out on the car with Ogden and Blair from Chicago as that leaves Chicago the 22d for California. I cannot go that far with them, but may go to the end of the track with them or in some other way. I would like to see the road. The N. Western people complain that the influence of our people on the line of the road is used in favor of the Rock Island and against them.

We must do everything we can to harmonize matters and to get all the money possible for the road, as we were so badly damaged last winter by waste. We are so very hard up for money to meet these claims and liabilities and our coupons on our bonds, that it is very difficult for us. I notice by one of your letters that there are a great many ties in the rivers and on the road that are not needed—and that a great many of them are not up to the specification. We should have a good sharp man or men that cannot be bribed to inspect the ties and timber and not receive or pay for a single tie or

stick of timber that is not upto the specification. We do not want any spare ties or but very few for many years, and should take as few of them as possible. I hope that Duff and some of the other Directors will be out with you sooh. I suppose the material that we have on the road is being taken care of, and put where it will be safe.

I hope to hear that the earnings are increasing, they have not been up to my expectations so far."

1869

On June 14th, from Promontory, I wrote Mr. James L. Williams, the Treasurer, the following confidential letter:

"I received your three letters, two of June 4th and one of June 5th, the latter enclosing receipt of John R. Duff for twenty (20) 1st mortgage bonds and thirty-nine (39) land grant bonds. The balance of 1st mortgage bonds I will take whenever the company is ready to deliver them. I do not want the certificates. Will instruct as to sale of the ten (10) to pay D. and S. C. assessment as soon as I get home. It is an easy matter to ascertain to a cent what the running department owes, up to June 1st, will be sent right in.

I have been out here this time nearly three weeks and have done the best I can, acting without authority and assuming responsibility that if what I do turns out for the best it will be all right; if not, then the plea could be made that I had no power. Now, do you appreciate that you have 1086 miles of road out here, with all kinds of questions arising, with no person here to say yes or no to a man or even give him satisfaction enough to keep him quiet? You, ere this, will know what was done with Montague, chief engineer of Central Pacific. He came here with no authority only to find out what he can for future use.

You will, upon examination, find that nearly all your losses occurred west of Granger, up to that point the work was managed reasonably well and cost fair prices, especially was Evan's part well handled, and if he had gone on, not gotten disgusted and quit, I have no doubt it would have saved us millions. When I see the orders given out here by Durant and Seymour, I am not surprised at anything. Bridging propped up for from \$1500 to

\$2,000 per mile, with less work on latter than on the former. So with grading and everything else, our supply Dept. was as rotten as possible and we will have great trouble in settling with some who got our supplies with enormous prices placed on them. I know the tendency now to blame men out here for all these things, but so far as I have seen if they had carried out their orders, you would have been millions worse off than you are. The fact of the matter is, a man out here discovered to be honest was discharged; if he made \$100.00 out of you he was a good fellow and was promoted and many who had worked faithfully and honestly for you saw the situation and accepted it, and the men who did all this, today, could prove enough east to destroy your efficiency and cover up their sins by wholesale. Charges against what few honest men there are I am sorry to say are not listened to. I state here, plainly and openly and defy any man to contradict it, that all our losses, all our thieving, all our wrongs, come directly or indirectly from Durant and Seymour's orders and it is no use trying to charge it off to any one else. They had full, unlimited power used it to its full extent, feed the directors with prospects of big dividends, the press with great ability and took full care personally of themselves. Now they are trying to shift the responsibility to the poor devils who were under them. They may make all of you down east swallow it but it wont go down here. Therefore, let me say to you when you hear any charges against any man out here who was put under them, before censuring him call upon him for his orders in the case. We have many dishonest men here but they are universally men put in their positions to accomplish things for other parties, and their dishonesty has been winked at, they know it and while they did dirty work for some, they took care of themselves. Most of you have been aware of this state of affairs ever since last fall. It is now too late to cry, we must make the best of it, save what we can, bury the past and strike out for a new future. We are doing comparatively no business. You know it costs as much now to run our road and keep it up as though we were earning twice what we are. We have cut down everything until we are weak and at the west end we are not keeping up our track. Before we can expect our road to be passed favorably on, we must complete the road, make safe our bridges, widen our banks, ballast our track, in fact, almost rebuild that portion of road west of Piedmont. The Central

Pacific Co. have at least six men on their road bed to a mile, in some places as high as ten to our one, filling it up with gravel and broken stones, building out banks to full width, replacing wooden structures, and intend to make it look well and have it passed upon. We are struggling along, fearful every day that some unpaid crew will ruin us. Threats against us on all sides and while I was put this time I was often advised to take care of myself to keep from being killed. Men will not believe that you have no money, they saw the notice in papers that July coupons would be paid promptly, and up they rise. I had to run Wade and Conklin and party through Echo without stopping. We ought to get rid of the the teams who are eating off their heads waiting, we could get along with the large contractors. I took up from small parties, whom I knew were suffering at least \$50,000 in small amounts to carry until they can get settled with and to keep them quiet.

We have got to increase our force on track west of Piedmont, through the winter's work, 50 miles in there. (Unable to read next page.)

It will be far cheaper for them to pay us cost of road but the policy is to get in and get our money back if possible and make our junction between the 1038 and 1040th mile post. If we could go to Hot Springs or Bear River it would be best, but we agreed to join within eight miles of Ogden and when you now see what that work has cost us, you can see the good judgment that made the agreement which fixed us at Promontory summit and saved to us nearly three millions of dollars of work done west of point where junction would have been made if it had not been for the agreement, as it would have been impossible to get our track beyond Bear River, and from what the Secretary of War writes me, the agreement and law passed, under a recent decision, is the only thing which saved us in getting our bonds beyond Ogden.

Strictly private.

Warren and Wilson have given the road a thorough examination. Warren has written a private letter to Secretary Cox about our condition, what we are doing, &c. and it is very strong in our favor. Wilson has been with me three weeks looking into our matters closely under private instructions. He has just received orders to return to Washington to meet the powers that be. Our law business is increasing very fast and we have got to put a man at its head to attend to it and nothing else and Wilson is the man. He has reputation and ability, the confidence of the country and administration and by such men we ought to build ourselves up."

1869

On June 18th, from Council Bluffs, I wrote Mr. James Brooks, the Government Director, on rate question, as follows:

"In complying with your request as to my opinion on freight and passenger rates on the Union Pacific railroad, as the company have filed passenger rates, I suppose no change for the present will be made; however, I am confident that we would earn more money at 5 or 6 cents per mile than at 7 1/2<sup>d</sup> as determined by the company. As now fixed, we are bound to have the entire press of the country against us, the voice of the people and finally a fight in Congress and are not going to command the trade. For emigrants I would reduce to \$60 from Omaha to San Francisco and run them on freight trains, or in fact, I would go lower in giving through rates from New York to San Francisco, compete with steamers and when they offer in large numbers we would carry them until that class of travel was turned this way. We are now averaging, say 40, though passengers per day. We could carry 200 and add comparatively nothing to the expense of the road. You are aware it costs a large sum to run one train a day over the road, keeping up the roadway costs as much to earn what we do today as it would to double the service.

On freights our rates are now prohibitory, ranging from 8 1/2 to 11 cents per mile. I would reduce immediately to 3 and 5 cents and would make special rates in New York, Chicago and San Francisco, on such terms as would for the next six months, command a fair portion of the freight going by sea. Upon costly goods we would charge 5 cents per ton per mile, on heavy goods, groceries, iron and 3rd class goods generally, 3 cents per ton per mile. In New York State freights cost about 2 1/2 cents per ton per mile. In Iowa now about 3 1/2. By giving through rates from New York, Chicago and San Francisco, on eastern roads at 2 1/2 per ton per mile and 3 to 5 cents per ton per mile on U. P. and C. P. we could command large amounts of freight that now goes by steamer. The time saved, hence interest on in-

vestment saved, risk by water, hot climate and insurance saved would bring our rates so near steamer rates that parties would try it.

My idea is that we have got to put able men in New York, Chicago and San Francisco and work for these freights. Give special rates and make it an inducement for merchants to send by us, try us if we make only our expenses. Once we get freight running this way it will never turn, but we will hav all we want and can soon get paying rates upon it by changing classification, &c. We have got the same fight with steamers that they had with sail vessels going round Cape Horn. We can command the freight in three months, or we can hold on to our present rates and have Congress force us down and even then not be able to turn the trade to us. Ours is a new project, they will patronize us and are disposed to give us a trial if we make an effort and give the inducement.. A year from now it will be an old story and require five times the labor to turn trade and travel out of old channels that it will now. The Company think my rates are too low and they can obtain the business sooner by holding to high rates but they will find differently. My objective point is to do the business that passes between the two oceans, or at least enough of it to keep all our wheels in motion instead of two-thirds of them lying idle as today, no matter if it does cost us extra for three or six months, it will pay in the end and can be done now for half what it can be done at some future day."

<sup>1869</sup>  
On June 21st, Mr. Hodges wrote me from Boston as follows:

"Enclosed are vouchers in triplicate for amount due me.

I handed in my report to you in Washington on the 17th day of Feb. I have charged at the rate of \$200 per month to that time. This charge is meant to include the week spent in and enroute to Washington and also about ten dollars of the expenses. That is to say my bill would be for same amount if I should make it out in any other manner.

If funds are not at hand, please approve and return. I will get the fund here."

He also wrote me from Boston on the 24th of June as follows:

"Yours at hand which was satisfactory to me to receive, inasmuch as otherwise I would have been prevented from writing further.

Matters are getting along here. The Casements were here a few days ago but have gone off, I suppose with some funds as they said they were not going without. Boomer is here now for money, but dont seem to get ahead much. The Omaha bonds, Millard has made some arrangement about. Gov. Evans has got a proposition from the Trustees to sell him iron ties, &c. and lease him rolling stock (12 1/2%) I suppose he had now gone to see if he can raise the funds.

Mr. John Duff, G. S. Bushnell and Oliver Ames are a Committee to get a new superintendent, &c. Mr. John Duff starts West tonight with power to perform all acts and discharge all duties which the President would have power to perform and discharge, if he was President.

Mr. Oliver Ames thinks of going out when the five eminent citizens go out. Funds are getting a little easier.

My brother started West yesterday. I gave him my vouchers for January and February and Washington trip with a request on you to pay or approve. I will write him again in a day or two."

They had worked up a great deal of prejudice in Boston against Mr. Snyder on account of his demands for money and what they considered his extraordinary operating expenses. In this, like a great many other things, they were all wrong but Mr Snyder had become so disgusted with matters that he finally determined to leave the road and there was nothing I could say to him which could induce him to change his mind. He knew I was only remaining on the road for the year, until I could get it up to the specifications and to complete it in accordance with my views of what was necessary and this also made him very desirous to quit. Duff, Bushnell,

and Mr. Ames were appointed by the Board as a committee to take the matter up and come to some conclusion.

Mr. Clarence King, a geologist, was in the West looking over the coal matters for himself and some private parties. He wrote me that the coal question was an extremely important one and he proposed to investigate it thoroughly and ask me whom there was of our engineers or employees who make it a speciality." I wrote him that we had examined the question thoroughly on our line and we thought we had exhausted it and I sent him the reports of Mr. Van Lennep who had done the work for us. After all his examinations he was not able to improve on Mr. Van Lennep's reports.

On June 21st, <sup>1869</sup> from Council Bluffs, I wrote Mr. Ames in relation to our terminals in Council Bluffs, which I had bought for the company some years before, as follows:

"In answer to yours relating to Council Bluffs land and depot grounds, we can lay off portion of them and sell at good prices if we give any guarantee as to the future, though a year from now when the bridge is nearer completed, we can get far more. Property around the transfer has increased 300% since we bought but must arise in that vicinity from prospective value. I am now having the ground cross sectioned, getting up plan of tracks, depot, &c. so as to see what amount of land we will want to retain and in what shape, and can lay off balance in town lots and commence selling if company thinks best. Could sell, if guarantee is given as to transfer <sup>and Co. Bluffs being</sup> U. P. terminus, &c. very high; they would run up to \$250 and \$500 per lot quick, which would be over \$1200 per acre. My plan would be as soon as we get settled on what ground the company will need to lay off portion of reserve and sell alternate lots as people call for them, giving them strength by advertising them and stating what was to be done. There is a half million or more dollars in that property for us if we manage it right.

We are doing nothing on our road in building or in work to bring it up to a standard that will stand an examination. Do you want me to widen the banks, ballast where needed, put in culverts, fill the temporary trestles, &c? We are now just patching up so trains can get safely over the road. As I wrote before, C P. are bringing up theirs to standard fixed by government except they are not changing the location. They are spending I should say \$1500 per mile on ballast alone, and are putting in a great deal of stone work to replace wood."

On June 27th, from Wahsatch, from Mr. Thomas B. Morris, in charge I received of repairs, the following letter:

"The "bad track" between this point and Aspen is improving slowly. The excavator is putting out from 110 to 130 cars of gravel per day, running most of it between Wahsatch and the gravel pit. The force at work putting under gravel is not large enough.

Most of the rivers are low and the bridges all seem to stand very well. The wagon road in Weber Canon is the most pressing thing now.

Two more of the bridges have been washed out. Mr. Hoxie wished me to tell you he thought it very important that something should be done at once as the travel was all going on the railroad track and they were liable at any time to be caught by a train and some one killed. Many wagons were broken down and are now along side the track. I have sent a man to check off the Howe Truss Bridges.

I think it would be well to have them carefully piled and covered with planks or boards. Curtis, the inspector of masonry, reports that the work is very well done, of the Devil's Gate pier the joints on the backing are not quite up to the specification you sent me but the stone used are all

large and well laid. He calls it good work. I have been there twice and think so also. The sand is too fine and they are using some lime in the mortar.

We have about completed driving piles and fixing up the bridges from Green River to Piedmont and are now fixing up the Sulphur creek bottom and down Echo Canon we will have to put in some more piles to make a safe jolt of the small openings. The freight trains East are running light this side of Uintah and we might make arrangements to haul stone for these small culverts and have the gravel trains unload them. The passenger house at Uintah is about completed. We put in some stone piers for foundations in place of lumber. They cost us \$8 per yard, about one and a half cubic yards in each pier.

We can only find one complete bridge for Sulphur Creek and will have to use two of the Echo Canon Bridges to complete.

Of all the bridges on my division I consider the Green River bridge and the Bear River Bridge (west) the ones which demanded attention first. I would not like either of these to go another winter and spring without being replaced.

I go on Monday to examine the bridge over Muddy, where we turn out to see if it will be possible to drive piles for foundation or whether we will be able to find rock.

Jno. Sharp was dissatisfied with the classification and quantities of his work.Appealed to Mr. Reed to come and see it Mr. R. went but what result is not known.

Sharp said he would have to get another measurement and go to Apostles Court about it.

Jno. Taylor, one of the Twelve, comes out about \$30,000 behind, and says it is due to a change in classification and want of proper estimate of quantities. Dont say what he will do. Capt. Bates has returned and they say his mule train has been taken by Hupey Dahler & Co. for debt. I saw Nounan the other day and he tells me he is short in quantities and in classification, that the R. R. Co. through Mr. Reed refused to give him the details of his estimate and he got them by sharp practice. He is very confident of proving that he has been cheated.

I understand that Lawrence made out his new bill or estimate that he will present and attempt to get judgment on.

Weber River is getting very low and I will try and get line run by first of July for the alteration of line at Clay Bluffs.

I did not give you my father's address in Philadelphia. It is 715 Walnut Street. I heard from Promontory yesterday that the C. P. Co. will move to Ogden on the first of July."

[1869] On June 27th, Mr. F. S. Hodges wrote me the following letter giving me the conditions as they were in the Boston office:

"The bearer, my brother, travels west to see the country. His studies in Germany and here have been in the Profession of a Mining engineer, which branch he proposes to follow up. He would like to examine the U.P. Coal fields, &c. Anything you can do for him will assist him greatly. I had been intending to ask for him a pass over the road but they are so chary of such favors here that I have not mentioned it. I have never asked yet for a pass for an outsider over the road.

I wrote to you a few days ago. Mr. Oakes Ames has since returned. He is the stanchest friend to your interests and to Mr. Snyder of any of the stockholders, and whenever he or his brother desires it, the board goes with them and against Mr. Duff who seems to be opposed to all the old hands on the road. Mr. Duff thinks harshly of Mr. Snyder on the coal question, judges him partial to the Rock Island Road and somewhat doubts his sincerity otherwise. He also seems to think wrongly of the location head of Echo, &c. Any of the Boston men going out there should be taken right into the ground where these disputes have arisen and shown the facts of the case. It has been said that Mr. Snyder has lately appointed Passenger agents all over the country without reference to headquarters. If this is so, it has hurt him. The Northwestern and other people are frequently reporting all sorts of stories about him. Mr. Rice of Chicago seems to stand a chance of supplanting him. Finances rub hard here. Certain members of the Board are, I think, looking too sharply after their own interests to help the company much. I understand that one of them expects to buy town lots on the line with his share of Land grant bonds.

As for C. P. R. R., Duff and others say that any agreement was unauthorized and seem to think of going back on it. But the fact of the matter is, there seems to be no decided head to this organization. Your bill has received much comment, I am employed in auditing or itemizing it for Mr. Ames and others. Thus the grading cost per mile \$23,580. Your affidavit at 40 cents per yrd. and \$3 for rock was about \$14,000. Huntington and the Commissioners over \$50,000.

Masonry and bridges actually cost per mile \$7,735 and rock material and laying \$32,564, &c. &c. Total per mile \$82,265, (all on the standard of your bill for \$4,387,254.80). The only chance for any agreement on this question is to have the C. P. and U.P. folks all meet here. The U. P. ought to have it figured out before hand just what they will take, considering fully what points the C. P. will have in case of any dispute. Has the question of consideration been suggested? The U.P. are afraid of the C. P. saying that there is no trusting them.

Your answer to Commissioners laid here two weeks before it was sent to Washington, and then Mr. Ames wrote a letter which will, I fear, if published, rather hurt than help the matter. I do not know whether the whole matter has been published yet or not."

On June 22nd, from Council Bluffs, I wrote Mr. Oliver Ames as follows:

1869  
Ogden to Promontory.

"I may not have explained fully items in cost of road, for instance, items of grading, grubbing and clearing, water hauled, &c. \$1,200,000. If that item should be used for grading, stone, so much per yard, the greater part of Hall, Carmichael and other company work would not go into that item, say \$300,000 at least, would go to supplies, corn, provisions, &c. which fed the men; and for grubbing, say 10 per mile; water hauling cost \$30,000 to \$50,000; wood for night fires cost \$50,000 and a great many other items as you will see from Reed's vouchers, pay roll &c. I put it together not desiring to go into detail, in my estimate, as Montague was evidently there to get our figure to work upon and compare other items generally and the departments charged to, such as masonry, bridging, ties, iron, freight, &c.

If you settle on \$4.50 to \$5.50 per yard, then nothing should be charged to grading but legitimate expenditures, the extraordinary bills of the company should go in separate accounts and grading should be charged up in about same rates as that done by contract, while Mr. Reed's bill is given separate and would make grading cost about \$800,000 or \$900,000."

I also wrote him On June 23rd as follows:-

"Yours of 17th received. I wrote fully about cost of work. If we put in grading at \$4.50 for rock and 50 per cubic yard for earth and charge it to what legitimately belongs to it, it will cover cost of grading. Cost of work I hold includes any cost paid out. A great portion of Carmichael's, Hall and Co. work can be charged to grubbing, water haul, wood, extras, voucher accounts, &c. I wish you would order Reed to turn over to me itemized cost of work from end of Oakes Ames' contract to Ogden so I can sift it and see where our great expense has gone there. When I can get hold of actual cost of work, itemized, I can classify it and show exactly where we have overpaid and by whom submitted. That is the only method by which we can commence probing to the bottom. We owe Carmichael a good deal, also Hill. We owe the bridge men, Seymour and Schalty for portion of teaming. Reed and all his notes with the men we ought ought to be gotten in here away from line of road.

Reed says he has not received or inspected any ties or lumber or timber since Jan. or February, the date of order to stop and if we are not tied up with Davis, Springer & Co., contract, we can get the ties coming down the river for from 50 to 60 cts. each. I telegraphed you for papers in Noonan suit. Look at my letter written from Salt Lake, which explains what I want. It is a very important suit to us and we must attend to it.

As far west as Bryan we have only 3 to 5 men to mile on road bed, beyond that we have more and will have to keep men until we get road well up, can then cut down. I have been over entire length of road since and cut off every man I could find not actually wanted; all our yard masters,

switchers, tenders, etc. have been discharged. I go west again to night to be gone a few days to look at matters up Platte Valley. Our bridges keep a very large force of bridge men to work. We cannot avoid it and keep safe, and we could do three times the business we do with same number of road men that we have now. I am very anxious to try Chinamen on the west division first to see how they will work. It has rained out here every other day for weeks and it tells some on our road bed, especially on that built in winter.

Can you get at maps and profiles in New York yet? I have got to make map and profile for commissioners and it woul' save me a big job if I could get the extra copy in New York.

Brooks and Hooper are telegraphing me about money to pay off teamsters at Echo, but I am carrying all I can here now.

John I. Blair will hire a lot of our flat cars. We will let him have all he wants. O. Ames thinks we better sell him some of our iron. I think so too. we have considerable in Chicago and about 70 miles in yard at Omaha, and about 15 miles along road, not used, including that around Echo.

We might sell considerable of our repair lumber, short lengths, &c. that we will not use if we should make the effort. Bridges go very slow; bad water, it is neither high or low, but probably just as well for us until we get straightened out. I hope, if the rain ever stops, to get our road bed up from Piedmont west so as to discharge portion of our force out there. That work, grading and all on Nounan's contract was very bad.

We bought some time ago \$30,000 or \$50,000 ties, good on delivery at Laramie for 55 cents, they were originally gotten for Sprague & Co.

Nounan's claim is made out of whole cloth trumped up now with intention of swearing it through. They were paid long ago in full. They base their claim on wrong classification, delay in delivery of goods, waiting for location, etc."

1869

On June 29th, Mr. F. S. Hodges wrote me as follows:

"I have nothing important to add to what has been before stated. Matters progress here about as before, and I think are getting a little straightened out. There seems to be a good deal said about over looking the Contractor's accounts and estimates, but I do not think that they will be overhauled.

There seems to be a great desire to get out of all trouble and settle as quickly as possible, and to take it for granted that papers are all right as they are. It is said, however, that figures of final estimates have been changed from the time that they were paid to the contractors on the road, to the time they were paid in New York, but you have heard all this and the rest of reports about two sets of books being kept, &c. &c.

I had supposed that when matters were brought here everything would be done on the square and that what was made would be for the benefit of all concerned. But it seems to be the impression among certain parties that they have not had their quota of former pickings, so the goose is being quietly picked yet.

It sadly needs a very decided and able man at headquarters to attend to nothing else. Mr. Oakes, I think should be the one of all here, C.S.B. owes according to the books (per Haine's account) a balance of at least \$325,000 but seems to be in no haste to settle, denying it possible that there can be any amount against him. I am getting rather disgusted with a great many of the movements here.

In my last I informed you of certain powers which had been delegated to certain men, but did not state my opinion as to whether any serious changes were contemplated at the time by grantors or grantees, nor have I since heard, but I think a mutual understanding between the parties is further necessary before any very important steps are taken. Money is growing easier."

Hon. James F. Wilson was very anxious to be appointed as a Government Director and I had made an application for him to fill any vacancy and he was soon appointed.

On June 19th, General G. K. Warren wrote me the following letter enclosing a confidential letter to James F. Wilson, one of the commissioners:

New York, June 19, 1869.

"I enclose a letter to Mr. Wilson, which I wish you to forward him. I leave it open for you to read so that you may know how matters stand.

Of course, this letter to you is confidential, and as it is I take the occasion to say that there is no man on the Pacific Railroad likely to deceive me except yourself. From what I have seen, I believe you have done the best for all parties that was in human power to do, and I believe you always mean to do the best as an honest man, and I would rather miss the mark in trying to be honest than to gain it in any other way.

Mr. Morris expressed himself kindly towards all the officers he met, and regretted he did not see you.

We were very kindly in our meeting to each other, and he told me some of his relations to the last campaign, (political) which my absence from the States had left me in ignorance of.

I suppose that my official duties with the Pacific railroads are now about ended and though I have perhaps been one of those who have crippled the finances of the company in prosecuting their work, I and those who have worked with me have had no idea than to make certain its ultimate success, and no matter what troubles may come in the future, all I can say or do will be in support of those who are now to manage the road."

Letter to Hon. Jas. F. Wilson:

"I went to Washington on the 16th and met Mr. Morris on the 17th. I found he had prepared a report which was being copied, and I had to wait till four P.M. next day to hear it read. Mr. Morris I think had decided to submit a separate report, for he did not give ours a very careful consideration. If you had been there we might have made an attempt to make a united report, but I am afraid we could not have succeeded. Mr. Morris scarce touches on any point on which our report is based, so we fortunately do not conflict much in regard to fact.

He holds that as a commissioner he has nothing to do with location (incidentally backing up Central Pacific Special Commission minority report) but he goes extensively into the financial management (which I don't think I have anything to do with.)

On the whole it is a sensational report which will have the effect to make the executive officers turn to our report for the facts.

Our interview was very friendly, and our differences were of a kind too great to attempt to harmonize.

I see no way to avoid such different reports except by confining the commissioners to more definite instructions.

Mr. Morris reviews the original laws of Congress, the action of the Railroad companies in their several efforts to have modifications made to their advantage, censures the action of the Board, whose report Mr. Harlan approved, &c. You must see it to appreciate it.

I added the remark I wrote to you at Cheyenne that I would add, which I think will be important to the Secretary of the Interior in deciding how to act for Mr. Morris' report virtually recommends the payment of no more bonds, and advises that Congress be urged at once to repeal the law which makes the Government bonds secured by the Second mortgage, and restore them to the security of the first mortgage.

Mr. Cox the secretary was not in Washington, so that I have written him a letter explanatory of the way in which the Commissioners have acted. In this I take occasion to speak of the subject of equipment and rolling stock for the last 86 miles of the road as being a thing that could not be fully settled upon till the transfer of the road was consummated, so that each road could adjust their outfit of the part they are to control according to the rest of the line. I also said that I thought the Union Pacific capable of being worked with less motive power per mile than the other with the same business, and that in the report of the special Commission we had estimated for an expenditure of \$1,600,000 to bring the C. R. to the same working capacity.

If this could not be enforced, I thought that equity required a reduction of 25 per cent of the motive power required of the U. P. or an increase of 25 per cent on that of the C. R.

As this letter is confidential to you, I cannot help saying that I congratulate myself exceedingly that it was my fortune to make the examination together in your company instead of Mr. Morris', though if we had all been together it would not have been so bad, and for the sake of all those concerned, I wish we could have all been together. These separate reports do

no good, and seriously embarrass good efforts at times, so that I am almost willing to concede something for mere harmony to gain a part of what I think is right, rather than risk all by too firmly standing up to extreme views of my own." This commission was Gen. G.K. Warren, Hon. James K. Wilson and T.B. Morris.

There was some friction in the Commission. The Central Pacific evidently had been at work on Morris to keep him from making any more reflections on the Central Pacific or from making any comparisons of the Central Pacific and Union Pacific.

On June 28th, <sup>1869</sup> T.B. Morris wrote me from Granger in relation to the progress of his work, as follows:

"I find upon a hand-car trip from Evanston to this place, that there are not as many men now at work on repairs as there were when you went over the road.

This is probably due to higher wages being paid at the mines and 50 cts per day being paid on the Utah Division.

The track between tie-siding and Wahsatch is but little better than when you passed over it. From Piedmont to this place it has improved very much.

They have a full compliment of men on the Utah division and the track is getting better every day. There have been no changes made in the manner of doing work for the reason that the men could not be found and when sent from the East they left at once, getting a pass out and going to the mines or West into the Central Pacific road.

I do not like the idea of putting up wages but something must be done to get more men on our bad track and keep them there.

I think fully half the work of widening the embankments might be done with scrapers and it might be worth while to see if a contract could not be let.

I will take some of the men who are asking for work up and let them see the place and get their prices and write you. As soon as stock cars can be taken to Corinne I will ship stock.

Two or three of the gravel trains with all the men might be turned over from the Utah to the Bridger Division, but I fear unless they are paid the same wages they are now getting \$2.50 per day, they would not stay. I do hope we can do something to help that track, it makes me blue every time I go over it.

The accident night before last was due to a cloud burst, which cut out about 30 feet of bank, about six miles west of Granger. Baggage and mail car went in and the tender of the engine, no one killed but the conductor had three ribs broken, some other employees were bruised and scratched. I examined the ground for the foundations of first (going west) crossing of Muddy. I find alternate layers of shale and rock on the east side, and on the west side we drove two piles for foundation of Bent of temporary bridge, and could only drive them about six feet. It would be best to dig for a foundation and rip rap the faces of the masonry. When the creek is down we can dig with little trouble. I go to Corinne tonight to see to shipping mules, and will return to Green River to see about throwing down that dangerous point of rocks.

The Howe bridges along the line are thrown off the cars in the most careless manner and should be piled and protected at once, shall we do it if the contracting Co. and Bridge men leave them?"

On July 1st, Mr. Hiram Price, the Government Director wrote me from Davenport in relation to the matters in Boston, as follows:

"On arriving at home last night after an absence of one week, I found yours of the 28th and this evening received yours of the 29th of June. There was but little business of importance transacted at the meeting in Boston except such as related to financial matters particularly the payment of the interest on the bonds due there in a few weeks.

I wrote you at the time what the arrangement was in reference to yourself as Director, that part of that letter I read to Oliver Ames before I sent it and asked him if it was correct. He replied it was and that they had promised him that young Duff should resign in a few days and you

appointed in his place, and that the only reason for electing him was that there might be a quorum of the board present because you could not have arrived in time for the meeting. You understand the directors were elected at the stockholder's meeting before I reached there.

I am surprised beyond measure that any set of men can have so little regard for their veracity and consistency and can so far forget their true interests as to act as they have done. The struggle seems to be who shall at the present moment get the most dollars, and I am of the opinion that if they had one hundred geese laying golden eggs, they would kill them all thereby proving themselves the greatest geese of the lot.

I know nothing of any appointment of any committee to find a new Superintendent, no such action was had by the Board, but I knew that Duff was anxious to remove Mr. Snyder, and he and I had some very warm words over it in the Board at the Boston meeting. Before I left, I had a conversation with both the Ames' and Dillon, and they all three agreed with me that Mr. Snyder ought to remain and that it would be both impolitic and unjust to remove him. I left Boston believing that that question was settled, and some of those men are in that board of directors. My opinion is that unless some of these gentlemen act with a little more sense they will get into trouble.

Duff's great trouble in reference to Mr. Snyder at one time was that he did not discharge Frost, now that Frost is discharged it would not surprise me that this should be a cause of complaint against him.

I am not able to say now when I can go to California. I feel a great deal more anxious to see things fixed about the conduct and management of the road than to make any trip just now.

I write to Oliver Ames today but whether it will do any good or not is doubtful."

Government Director B. F. Wade, with Roscoe Conklin, under the guidance of U. H. Painter, had been travelling over the Union and Central Pacific roads and were returning. I met them and took them through our property and explained to them pretty thoroughly everything that was going on on the road.

On July 2, 1869, from Council Bluffs, I wrote Mr. Oliver Ames as follows:

"I enclose the communication of J. R. Whitehead of Laramie Co. We have never paid taxes west of Douglas Co. and we are getting into trouble as well as getting the people down on us and they will soon be heard from. At Cheyenne we can pay up by purchase of scrip at about 40 or 50 cents on the dollar. The assessment is fair. Write me relating to this. I also want instructions on following points:

1st. Shall I prepare to put in Green River and Black's Fork bridges? This year's experience demonstrates that bridges on all these streams are unsafe, extreme high water will take them out. The truss superstructure is on the ground, we have to put in masonry which I should found on piles. There are three crossings of Black's Fork, one is just now completed—one crossing of Green River, Muddy and Bear River, all dangerous streams in high water and temporary bridges must be replaced this summer and fall before it freezes. I believe I can get first class masonry done for 12 1/2 dollars per cubic yard. We cannot commence on these too soon.

2nd. Do you propose to ballast the road where it has not been done? 3rd. Do you want the road from Piedmont to Wahsatch brought up to a good condition, banks widened, bridges replaced—many small ones are unsafe and must be replaced. We have only patched them so far, so we could run over them. From Piedmont to Wahsatch we gain on road bed very slowly, it is all too low and narrow, and it has rained four weeks steady. Men we send out there don't stay a day. Labor is scarce and is worth one dollar per day more than we pay. My plan would be to contract the widening of banks to some man cheap, and let it be put up from the sides, and use our gravel trains entirely for ballast after banks are widened and brought up to grade. None of this part of the road will stand inspection. Fifty feet grades have been run up to 80 ft. and banks have been

chopped up all along from Piedmont to Wahsatch mostly over Nounan's work to save winter work and get out of the way of trackmen. We are at work on them and keep them up so trains will run but to pass muster they must be thoroughly rebuilt, grades raised out of the mud and above the snow, and it wants to be done by spade and scraper from the sides; it is the cheapest way. If we had Chinamen we could soon do it. We have sent men enough west to do it, but we did not get a day's work a piece out of them; therefore we quit sending them; they merely went to get passed.

4th. Shall I take charge of the bridges scattered along the road, and get them piled up in shape, save them, see that they are all delivered house the iron &c.? They are all in bad shape and need attending to, but are still in the hands of construction department and I do not want to take charge of them until you direct it.

5th. We have stone and lime mostly on hand to finish the Blacksmith shop at Cheyenne; this now up to top of the windows and stands there To save it we ought to complete it. Shall I go to work on it?

6th. Road from Wahsatch to Ogden is in good shape. Ballast and most of bridges will pass inspection, banks are out to full width and up to grade.

7th. From Ogden to Promontory, I ordered no work done except to keep the road in condition to safely run over. It is in fair condition, but if we retain it should put more men on it, ballast more over mud flats.

8th. I sent one of my engineers over C. R. R. to see what they were doing. They have a very heavy force to work on track, say six men to mile, and as gravel train to every twenty miles over bad portions, and are fully ballasted with stone and gravel, filling all banks out 14 feet with same material, and today their entire track is as smooth as the best portion of our road. They have had about 3000 Chinamen and 500 whites to work on the 400 miles west of Promontory since the day tracks connected. This is in addition to regular section men. They are camped along their line in large camps at regular intervals, and as soon as they finish up their stone work, small culverts, and bridges they are replacing with masonry (they have no large bridges to build), they intend to ask that it be examined. If that should bring on an examination of our road, at same time, our road bed and bridges will not compare with theirs. If that commission go thoroughly into location, shops and stations, we will be far in advance, but I am inclined to believe Central Pacific are determined to make their point on road bed, and cars and engines, ignoring all the rest. These are matters for you to consider I assure you. They are important ones for our future, especially if Central Pacific succeed in getting a commission in next sixty days, which they are determined to do. Please answer on the points that I ask instructions about."

1869

On July 3rd, from Council Bluffs, I wrote Mr. Thomas B. Morris as follows:

"I am in receipt of yours of June 27th and 28th. I sent passes for your father and family. I see no way to get track up except to work away at it the best we can until I can get authority to contract work and the company can furnish me funds to pay when contracted. I have asked for instructions as to wagon road and will give orders as soon as I hear from the Co.. Whenever the company instructs that we are to take truss bridges, those that I do not put up will have to be taken care of. I have asked for orders to put up Green River, Black's Fork, first crossing of Muddy, and Bear River, first crossing. The balance we can pile as soon as they come in the company's possession.

I want an estimate of cost of foundation and masonry on each of these bridges separate, and let estimate state where stone comes from.

I have asked Congdon for estimate of cost of iron pipe, but our foundry is now closed and I doubt if we shall open it again this season.

Where are the Sulphur Creek Bridges? Who made them? Were they ever delivered? There are two straining beam bridges 50 ft. span, L. and Corse make on Bitter Creek that we will throw out. At Muddy you will have to go to rock or its equivalent for foundation. Put it in when Muddy has run down. If we conclude to build there what do you think you can get first-class masonry done for? Are they doing anything with Ogden and Bear River west; if so, what? Are they at work at quarry? Are they putting up combination bridge at Devil's Gate? If so, what process?

Have ordered Eddy to send you profile and map of road from Green River to Ogden?"

1869

On July 5th, I received the following letter from Mr. J. L.

Williams, from Big Rapids:

"Yours of the 28th received. I hardly understand what is the trouble with our Company, but suppose it grows out of want of money to pay debts. What is Durant doing? Is any new program arranged for bridge? Will it go forward? When can it be completed? Chanute writes that his bridge is done.

I am trying to get matters on this road in such shape that I can go over line to California this summer or fall. When will you go? I see there is meeting of Board in Boston 18th of May. I ought to attend that. Write often. Better direct it to Ft. Wayne.

At the time we were out last year, I found my nephew, M. T. Burgess in charge of 20 miles on Bitter Creek under Hurd. His superior engineer spoke well of him as an assistant, specially for industry and energy. After that he was in Salt Lake Valley at Brigham City and Co. If he continued to merit the good opinion of his superiors, perhaps I could aid him in getting employment in the profession. If you see Reed or any one who had to do with him, will you please inquire and write me?

My son older than the one with us last year, will go over the road to the Pacific about the middle of July and may call on you.

P. S. Sometimes I fear that Grant or Cox may think I am paying too little attention to U.R.R. this year, and give my place to some one of those who want it so badly. Please guard against this through Rawlins or otherwise.

I intend to get through with this *job* soon, and will look after the railroad as much as is necessary. While so many are examining it, and reporting on it, I think any further report from me is useless, indeed, I think it is already rather too much examined and reported on. What do you think of <sup>Commissioner</sup> Morris' report? Does Warren think with him?

A great many seem to desire prominence by reporting on the Pacific railroad."

1869

On July 6th, from Council Bluffs, I wrote Mr. Ames as follows:

"I met Conkling and Wade on their return from San Francisco and you no doubt saw Conkling's dispatch to Secretaries Cox and Boutwell, which I got him to send and I gave it to press to publish. They speak well of our road as being better than Central Pacific except in road bed. They were evidently pleased with their trip. Some one should go to Washington, get and publish Wilson and Warren's report on 86 miles; also get Wade and Brook's dispatch ~~sent~~ from San Francisco, and give it to the press. I was unable to get it; it was given to the press in San Francisco, but they refused to publish it or failed to do so.

I have not seen Duff or Bushnell; they didn't let me know they were coming here, and they went directly west. Seymour was with them as far as Omaha, and then Frost accompanied them West. Frost is making a big effort to be reinstated and remove Snyder. If we are to believe the stories put out here by Frost and Seymour, those men who had the nerve to stand up and dare to have a mind of their own, who saved you from absolute bankruptcy are to be crowded out by the persistent lying of these very men who cost you millions by their continuous stealing.

Mr. Frost was removed, as I understand it, with full approval of yourself. I know it was the work of Dillon and Duff when they were out here, but they told me it had better not be done until Durant was out. Now they make the community believe Snyder is to go for his 1st removal, which takes from S. what little power he has left. The banks are frightened and calling on us to pay up our overdrafts as we go. These continuous threats and rumors of change out here are bad, very bad, and if we intend to make a change, make it, if not, put a stop to the mouth of every enemy of the road who is using it against the road, cut off our enemies, recognize our friends, etc.

One thing is certain, the removal of Frost has taken a big load off the shoulders of the Republican party. They are rejoicing that they will not have to pack him any longer. He (F.) told me the day he was removed that Snyder had not a friend in Omaha, when I began to inquire. I found that the removal of Frost was looked upon as a good thing for the road and very

regretted it. I was surprised at this, as I supposed he had a strong hold on Omaha and especially his party. All railroad men who have gone over our road evidently speak well of the discipline and management of our road, especially the evidence they see in action of subordinates whom they know and see that they are under the orders of a man that knows his business.

You may expect trouble in Washington, I think, unless a strong effort is made, they will call on you for more bonds and everything favorable to us should be made public. Central Pacific thinks we are trying to play sharp on them in our estimate and intend to fight estimate down under the law that they only have to pay par value, &c. &c. Passengers laying at Promontory 15 hours waiting for us to start is all wrong. Central Pacific should make connection with us going east same as we do going west, or else you must try to get time changed from here east. I don't suppose we can do that. In August, C. P. Claims they will run to San Francisco, by rail and will make close connection. At Promontory there is no place to stay and 15 hours in the hot sun and no shade no amusements, no sights, &c. makes passengers growl. P. O. Dept. will make Central Pacific come up with their time or mails to our time. Special agent is looking after the matter; also to see where great delay in mails is now going west. We make it in seven days from Washington, going east, nine days. Time could be shortened up 18 hours if C. P. would come up to 20 miles an hour and make close connection.

r. S. Cannot you remove the offices and agents of construction from Echo? Now that you have settled with teamsters cannot we get them away from line of road so as to get rid of the talk and threats, they think they can do anything in Utah."

<sup>1669</sup>  
On July 5th, Mr. Morris wrote me from Wahsatch as follows:

"Since I last wrote you, we have had a cloud burst in the most Eastern of the Weber narrows. It lasted but an hour and yet it carried loose stones and earth down the side of the mountain and deposited them on the track in three places to a depth of about ten feet. A freight train ran into one of these washes and broke a flat car and slightly hurting the engine. We were detained about 24 hours by it. The masonry on Sulphur Creek is failing fast and we have one bridge raised on the piles and are putting up the others as fast as possible.

The Mormon people of the Weber Valley are complaining very bitterly about the road through their Canon. A man was here to see about it yesterday. The new roadmaster on the western half of the Bridger Division is a first rate man and during the last week has done a great deal towards bringing up the track. And the road from Aspen to Wahsatch can be run safely at 20 miles per hour, except in one place.

No effort has been made to put in embankment from the sides because the men have not been on the road. Out of 30 men sent from Lodge Pole Division sent to help out only two went to work.

We will not be able to get that track smooth and the banks up and widened this summer and fall unless we can get more men.

I enclose force account on the division from Green River to Wahsatch, for the last of June.

It gives all men at work on tracks gravel pits and gravel trains. There are some additional culverts which must be put in before next spring, quite a number in Weber Canon. By additional I mean openings made where there are none of any kind now.

In quite a number of cases where the embankment is light we can crib up while putting in the masonry and in others we will have to pile and put out stringers to support track while excavating.

John Sharp told me that Mr. Reed had reclassified some of his work, which I suppose will prevent trouble from him.

I made an arrangement with the Mormon settlers at Uintah to fix their own water ditch for \$100 and relieve the company from all blame in the matter. They have fixed it. What shape shall I put the work in so they can get their money?

A man wanted to take the contract to make the wagon road good through Weber canon, had I not better let it to the Mormons, they will do it cheap, now they want it so badly.

John Sharp built the foundation walls for the Uintah passenger depot; how shall I return his quantities so that he shall get his pay?

A gange of men go to Green River to put in chamber for large blast in bad rock point.

Almost all out cuts must be cleaned out, sloped, and in many cases widened, particularly through the snow region. We have also some additional rip rapping to do. The rivers are all low, the Weber almost down to its summer work.

The grade at Devil's gate is almost all surfaced. Lays out and looks well, and bad track between Echo and Wahsatch has been fixed.

If we are to keep the track from Ogden west we had better put on a few more men as it is easier to keep up than to put up. I would advise an alteration in line at the Devil's Gate sand point. Will send you plot of present line and proposed change."

On July 8th, 1869, I was sick at Council Bluffs, and I sent Mr. John Duff the letters of Oliver Ames, dated July 2nd and 3rd, which he asked me to consult Mr. Duff about.

On July 10th, 1869, Mr. Snyder being hard up for money, I raised him \$20,000 in Iowa and sent it to him.

1869 1.B. On July 10th, I wrote Mr. Morris from Council Bluffs as follows:

"For payment of work you mention make out regular estimates, put on your own certificate that work has actually been done, and return to me to approve, and I will have vouchers issued on it, and return to you or the man entitled to them.

I can give no orders yet as to road down Weber, it is not yet in hands of the company but I prefer to let the contract to the road company to repair it and assume all responsibility for it hereafter.

Sharp's estimate wants to be returned regularly. "U.P.R.R. to John Sharp, Uc." - stating what he has done, at what price. You want to certify that work was done as stated, &c. Make out regular bills same as on all roads. I will see if Snyder has any blanks; if so will send them out, if not, you can fill up one of our vouchers.

I expect in a few days to get orders on all matters now in statut quo, waiting for settlement with contractors. Do you know about settlement Bushnell made with the different contracts? If so, what?"

1869 1.B. On July 10th, Mr. Morris wrote me as follows from Wahsatch:

"Your letter of 3d mailed 7th received today. I will fully examine the ground for foundations and masonry of bridges mentioned in your letter and send detailed estimate of cost. Some of the bridges which are now along the line of the road are in great danger from fire, they have in several cases caught, but have not burned long before being put out. On Sulphur Creek there were five bridges, three of 50 feet span. I found one of the 50 feet bridges and parts of the two others. Cannot find anything of the two 30 feet bridges.

Some part of the two bridges which are missing (50 feet span) were used at Devil's Gate Bridge when we had temporary trestle washed out. The 50 feet spans on Sulphur Creek are made by Ludley and Corse. The masonry on Sulphur Creek has been built for 50 feet clear span; the bridges made for 50 feet length of cord, and we have no bridge on line which will fit the Sulphur Creek masonry.

We have eight bridges, made by L. and Corse, ordered by Dr. Durant about a year ago; all 40 feet span which as far as I can find out are extra, and we are using those bridges for all the crossings of Sulphur Creek except one.

Piles are all driven for these bridges, and by Wednesday we will have them all up and ready for track. On account of the embankments being low we may have to wait a few days before putting track on them, but will put track on all where the temporary bridges are in any way weak. These bridges are well put up, and I consider the pile foundations good for two or three years should you wish to postpone the building of the masonry, needingly only a little rip rap.

The pile bridge over Bear River east needs but little to make it good for several years. A few additional piles and a little rip rap.

But the second crossing at Corinne is very high and the piles not more

than half driven. We will have to strengthen that bridge and also the trestle work on the east bank of the latter settles badly.

John Sharp wants \$13 per yard for first class masonry in and about Salt Lake Valley. If he would put up the masonry at Green River and Black's Fork for that price I would call it cheap, company to haul stone. He to quarry and load them and unload them.

I will see him tomorrow and will write you his prices. There are two or three stone cutters at Ogden and Bear River bridges, but not effort has been made to get foundations ready. All the streams are very low and we can go to work at almost any point should it be desired.

It is about time to be looking after our snow fences. I think there will be no trouble in supporting embankments by tiling, the only point will be it will require a great deal of it for a small opening.

Would it not answer every purpose to import the cement in barrels, finding gravel here, and make our own cement pipe? We save freight and breakage which will be very large.

Perhaps we can use a percentage of lime in the pipe, thus reducing the cost again. The thickness of the pipe need not exceed two inches for a two foot pipe, and would not require a very large quantity of cement.

The track is improving at every point except from Ogden west and there the force is not as large as at other points; and we have hauled no gravel only a little of that light material we call ashes, which is very bad when wet, and very light and dusty when dry.

There are now at work on the Utah Division 278 men, four gravel trains and one steam excavator. Distance 116 miles. This force is much smaller than it was last month owing to the reduction in wages.

The survey of the road is complete as far west as Echo City. I will forward to you complete profile or will make alterations in grand line on Original profile which Mr. Eddy has sent me. There is a mile and a half which makes a fall of 1-9 per hundred feet or grade of 100 feet per mile, in many places owing to settling in embankments and in some few places the grade is as high as 130 feet per mile for a few hundred feet."

On July 11th I received the following letter from U. H. Painter from Laramie:

"There is a great deal I can tell you when we meet but do not care to put over wire. Everything now runs smooth at Boston. McComb has gone surely into partnership with Fisk, is trying to make all trouble he can. There are eight of our party, Wade and his wife, Conkling and two of his New York friends, General Boyton and Mrs. Painter. We have the Ogden sleeping car and have come so far very nicely. Conkling says he has not been able to find so far a single point which any one has a right to criticize and that there ought to be some severe punishment for Snow and the men who have been maligning the road for purpose of blackmail. Wade says he never saw a better road or equipment. Conkling would like to get a chance to do a little trout fishing. I want to have them go over rest of line in daylight so when they get to San Francisco their opinion can be made useful. Sharp would like to go to Salt Lake City, and any advice you have to give about further progress will be taken. I have telegraphed to Hooper at Salt Lake City that we will be there in a few days.

Bushnell is coming out with Kelly, Hooper, Brooks and few others in Central Palace Car Sleeper. They leave Chicago Sunday."

On July 11th, I received the following letter from Mr. Blickensderfer from :

"I have received a telegram from Gen. Rawlins requesting me to serve on a commission to examine location of Hudson River West shore R. R. through the lands of West Point Academy, which he says will last about two weeks. As there are various reasons why I would rather not decline this service, I have ventured to answer him that I would go with out previously consulting you, believing you would be willing to have me post-pone my work with you long enough to accommodate Gen. Rawlins."

ing of the operating department and changing  
The Duff, Dillon and Ames Committee for investigating the Superintendent,  
had agreed upon Mr. Hammond of Chicago, as General Superintendent.

<sup>1869</sup>  
On July 12th, Mr. James F. Wilson wrote me from Fairfield, Iowa,  
as follows:

"I have your telegram to Chicago, also your letter here. I can't go West with you at this time; am sorry, but can see no other way about it now. I see Hammond is to take Snyder's place; who did this? I thought it ought not to have been.

Give me all the items you can that will be of service to me, the government and good service on the road; for if my commission as Director comes on I may need them. What are the arrangements now about the meetings of the Board? How does the case stand between the U.P. and the C. P.? Has anything been done? When will Oakes Ames be back, and what do you hear from him?

How long will he be gone, and when will Price return? We let H. and St. Joe run a little too soon. On Friday it was 123. But it is no use to cry over spilt milk.

The Senatorial fight is becoming interesting, and I have just read one item which will make it more so, I have read a letter from Grimes dated June 30th at Paris, in which he says he will resign, resignation to take effect about the time of the meeting of the Legislature. Say nothing about this as it is possible he may change his mind, and at all events it had better come out in the regular way.

Grimes wants me to write him on the subject; what had I better say? Do you think he ought to resign?

I don't see how I can assume any different position on the Senatorial question. I don't want the place and would not make a fight for a life lease on it. Still this being understood if the Legislature should tender it, it could not be well declined. But no such thing will happen in this State.

Harlan's last fight, and the greed of candidates puts such a contingency beyond probability, not to say possibility. The Cooley arrangement looks like a fight against Allison in the 3d district. Of course C. stands no chance. Altogether it may result in putting Merrill on the track, and he would have a good deal of strength. Wright feels secure; but some of his friends are getting uneasy. Taken all around it promises to be a pretty kettle of fish before they get through with it."

Mr. Wilson was going to be appointed a Government Director by General Grant to fill the first vacancy.

<sup>1869</sup>  
On July 13th, I wrote Mr. Ames as follows in regard to the snow fences on the road:

"I have had measured and estimated the length and cost of snow fences that will be required to be built this year to protect us from snow during the coming winter, between Omaha and Ogden, 10 56 miles. I have made estimate at prices that we have been paying, anything that can be saved over those prices will be our gain.

4th 100 miles	726 rods	snow fence,	\$4,537.
5th 100 miles	14,620 rods	" "	91,375.
6th 100 miles	7,920 rods	" "	49,500.
7th 100 miles	792 rods	" "	4,750.
8th 100 miles	3,720 rods	" "	23,250.
9th 100 miles	4,050 rods	" "	25,312.
56 miles of			
10th 100 miles	2,048 rods	" "	13,000.
		Total.	<u>\$211,724.</u>

1869

On July 13th, I received from Mr. James S. Williams, the following letter in relation to money for the meeting in Boston; on C.P.R.R. matters:

"Yours of 7th July at hand. With regard to the \$15,000 you need for engineering &c. should suppose you could get it at Omaha and that you and Mr. Duff had better arrange to pay it from the road's earnings. rather than draw on us here for it. You had better collect it there. Money matters are awful hard here.

Am this evening in receipt of your telegram, and have replied.

It is very uncertain when Mr. Ames will go out, he will want to see and consult with Mr. Duff and probably have the five eminent citizens go out all together, say about the first of August. I wish that you, Duff and Bushnell could all be here together, and that a program in which all would unite could be arranged for action with C.P.R.R. they are a great block in our way, and will be till we settle with them, the matter of point of Junction and selling them the road ought to be settled soon. Think that the C.P.R.R. are a party to the effort to keep our bonds down. They are 88 and 88 1-4%; no reason for them to be so low.

Evans is to have our iron for Denver road and will pay, so he says, as fast as we deliver it, so hope it will be hurried up."

On July 15th, General G. K. Warren wrote to me in relation to the transfer of our road from Promontory Point to Ogden to the Central Pacific, as follows:

"I think in any arrangement you may make with the C.P. Co. for transferring the road from Promontory to Ogden, it would be well to make arrangements for securing the completion of the work so that the Government will not have the case complicated by the transfer.

I have tried to act in a most liberal manner as a commissioner so as to facilitate the transfer by you."

On July 15th, I received the following from Mr. Hiram Price, one of the Government Directors, from Davenport, as follows:

"Yours of the 9th inst. received by yesterday's mail. Two days since I received from Oliver Ames a reply to my letter in which among other things he says that "Mr. Duff has gone out on the road to look at matters at Omaha, and to make such inquiries as he may think proper, and institute such investigations into matters as may enable him to form a judgment on the operations of the road, and report. I do not anticipate that he will make any changes."

But from my past experience, I should not be surprised if the President of the Company would consent to changes for the sake of peace. I have written to Wade this morning a long letter giving him my reasons at length why Mr. Snyder should not be removed.

I am inclined to think with you that political influences have much to do with this matter, indeed, I know that Duff gets some of his information from Senator Thayer.

A notice of a meeting of the Directors at Boston on the 14th inst. was sent a few days since, and a letter from the Secretary saying that the meeting was only for the purpose of "approving the appointment of C. H. Warren of Boston, Transfer Register, and also to authorize the collection of interest due on our currency bonds at Washington and intimating that it was not essentially necessary that I should be present. I think that the By-laws provide for quarterly meetings and my impression is that the next meeting is in August, but I will write to Boston today and ascertain and let you know."

On July 15th, from Council Bluffs, I wrote Mr. Morris as follows:

"I telegraphed today about taking possession of quarry and putting a few men to work. I want to get rid of all the old trash connected with our road and work. I have no confidence in them or their work, they have been in too rotten a school. It is my impression that I shall put in all the Black's Fork bridges on the present line, and you want to have Rick-Secker get up your plans of piers, abutments, foundations, &c. The west crossing of Bear River I shall put in; might do it right away if I was rid of the masonry contract, as I won't pay \$27 1/2 or over \$12 per yard for masonry. I prefer if I can get good mason and good foreman to build the masonry ourselves, we will then get good work. I want stone inspected at quarry first and no stone allowed loaded on cars that is not fit to go into the bridges, ill-shaped, ungainly, hard to dress or inferior in any way; then we will not get any such in a pier. Again, I want well banded work, well laid with plenty of mortar or cement, and good bearings, rough work then will stand, or even if stone is not very good it will stand. We will have to be careful in our pile foundations to get piles well driven. We ought to get our piles in for 50 cents per lineal foot- 20¢ for pile and 30¢ for driving, and our masonry should not cost, at present wages, over \$10 per cubic yard, if men half work and we go to work soon and have all the season before us. I would get stone on the ground by time we want to commence laying it at each Bridge, so as to be sure of no delay. We have got here plenty of Louisville Cement; it is old but sets well, not quickly. You want to see that bridges thrown off are taken care of. You better get Mr. Williams or some one who knows where all our trestles and bridges are, and where we have watchmen get an order from the Superintendent, and have him watch them, as well as the bridges at Green River, the pumper can do it. The bridges ordered for Sulphur Creek we want to get together what ever is left and see what is missing. Want the 30 ft. spans put in at Green River or Ham's Fork or Black's Fork. I shall not put in masonry there right away. Bear River Bridge will have to be put in this season. That masonry will probably all have to come down and pile foundations put in, and better stone used, unless you can sheet pile round present piers and make them safe.

You want to send me an estimate of the length of snow fence required on your division; kind of fence. Many of the light cuts from six feet up will require some fences

*and avoidance cuts in case under that Playa*

The stone for junction had better be marked "Junction of the Union Pacific and Central Pacific Railroads, May 10th, 1869".

I intend the tile for openings where it requires only 18 inch. or 2 or 3 foot water way. pipe costs \$1.25 per foot here and we have to take the chances of getting it cut safely. Cement I would prefer to make out west if we can do it as cheaply and if it will last as long.

The change of grades and alignment made on eastern end of road, I prefer to show right on the original profile and maps so we can see what is to be done to get back to our grades and curvature. Where change is detrimental, you could show it in blue lines or some such way.

You want to look around quietly and see what it will cost us to do our work, who it is we can get to do it, but say nothing about what is to be done or where. I shall go out next week and then give the final directions at all points. The work must be done well, all of it and cheap. We have got to stop paying all outrageous prices. We are independent, if we cannot get our work done at a fair price then we will not do it. I shall arrange to have our material promptly on the ground; no delays. Fix up the quarry platforms and tracks so that we can handle stone there economically and not have to shift cars all the time. I should throw

track away from loading platform; have that track face the siding. Consult with Hoxie if he is there; tell him what is to be done. May be able to put you on track of a good man and post you on some that are not fit who may now be in our employ. If we do our work by the day or will have a check on pay rolls, by the amount of work done and if men in charge do not do well, we will discharge them; they cannot run us over a week or two without our discovering it. We will have to repair that road down Weber and ought to avoid crossing. See what the company will take and release us from all damage and take care of road hereafter. I will let you know when I start so you can meet me at Green River, if possible. Bring maps and profiles showing changes as far west as

All your vouchers, accounts, &c. send to Mr. J. E. House at Omaha, all communications, estimates &c. for me send to my address at Council Bluffs, Iowa."

1869

On July 18th, Mr. U. H. Painter wrote me from West Chester, ra.

as follows:

"I went over and spent two days trying to get the directors to look upon the situation as it is, and to act at once, and came away very much disheartened. The Ames' claimed that the road was making the interest and the stock would be good yet, &c. I denied both points and they referred me to Snyder's daily reports. I struck out the item of contractor's freights, and half of the Government account and it left an average for June of \$19,000 per day. I asked them what their daily pay roll was, and they had no idea. They said the through freights have not set in yet, I told him they were not likely to unless there was a change in the rates and some special rates made for special cases; they said that could not be done, that what discount were made ought to be made by the lines East of Omaha. That Dodge wanted to cut down rates, but at the figures he would do it, it would not pay expenses. I disagreed with him and said unless there was a change, they would have freight cars rot down on the track. I urged a strong and vigorous management of the road with you at the head of it, he, Oakes, said "Why he is at the head now, and has his own man, Snyder, as Superintendent." I said you were not in the Board, and I wanted to know why there was any further delay in giving you Durant's place as was agreed upon. He said that they could not get a quorum of the Board now to do business and they were compelled to keep all in who were near Boston. I asked him how long that state of affairs would last and he did not know.

Bushnell has settled with everybody and given drafts for \$,2750,000 and written most glowing accounts of the prospects of the road, &c. and got their ideas way up. I tried to get a move made to have the bonds issued to Promontory to the U. S. before the C.r. made trouble and told them Wade authorized me to say he would go to Washington and help if they let him know at once, but I came away without getting anything fixed. I showed them that the interest they were losing was over \$5,000 per day, and the bonds could be issued and left on deposit if Boutwell would not release entirely. They were delighted with Wade's and Conkling's reports and assumed to think they could go to sleep on them. I told of the way they were prepared and of Conkling's talk with you. I hammered away at Williams, Hazard and the Ames for two days and set them to thinking anyhow. They were surprised to hear Seymour and Frost were around Duff and that he had not seen you. I am glad that Jim Wilson is on at last. Now if he will act with Wade and put a little life into matters at the August meeting, it will be well. Wade is sound to the core. I expect Alley back to the August meeting. I have written him that he must come at once or the bonds would sell for 60 cents before six months, and the stock was now at 20 cents.

That pretty map you sent of lands on the Platte, made their eyes bug out as though it were lists of fat bank accounts and no debts in the family.

Morris, the Government Director, has made no impression in Washington except with Grant, but he has with the public. Conkling's message I had to send to Utica for neither Boutwell or Cox would let it be copied for print, and yours seemed to miss fire entirely. It did a heap of good."

1869

On July 19th, from Council Bluffs, I wrote to Mr. J. M. S. Williams, the Treasurer, as follows:

"As now situated, the running department can furnish me no money. I am raising it (money) all the time, and it owes the banks over \$100,000, being carried individually by Snyder and myself, sometimes nearly double that amount, and men east of North Platte have not been paid since February. Discharging so many men and paying them up to date takes all the road can earn and more to. I can get money here, on my own individual paper, and take care of my Department, but as to doing the work and paying for the building of bridges, finishing of shops, putting up of snow fences, and all the other things that belong to construction, I cannot do it, nor can I do the work economically unless I can pay for it promptly. If the running department was once paid up, we could get along. It is useless to bring out those five commissioners now. Their instructions are the same, virtually, as give Warren and Bickesnderfer only fuller, and all the data obtained by W. and B. is given to them in detail. All the bridges needing stone work, all changes in grades and line required have been copied from the private notes of Warren and Bickensderfer. They were requested to

furnish them and they will be instructed to see what portion of the work has been done, that portion not completed they are to estimate what it will cost to do it and report. Now our bridges, many of them, are incomplete. We have only 287 men at work on entire Utah Division on track, and 300 on bridges, with miles and miles of road to ballast, with grades to bring up. For miles in building last winter, grades were dropped right down on banks, from 100 to 130 feet, grade per mile, and it will take a long time to get it up with our small force. Banks were built just wide enough to build track over and are now settling and need building out, and shops and round houses are to be built at west end, have none now for 400 miles. We have had three weeks, steady, heavy rains; it has ruined our crops, injured very badly our railroads, all in town have suffered heavily. The Union Pacific had two bridges washed out, banks in some places moved, &c. Two trains were ditched and one passenger killed. We, however, were very lucky compared to other roads, but I tremble all the time over the wooden structures down Lodge Pole with no foundations. If they are to remain, we must put in a pile foundation to all of them. They only trouble us during the heavy rains, then they go out and smash up trains for us. In building them very little attention was paid to putting them in properly. The country was very dry, no water in streams, but now we see the necessity of good foundations, no matter what the material is. Both of our trains went into ditch from wash out of bridge foundation. The road stands remarkably well and I hope we will continue to have as good luck in the future as in the past, though I fear all the time we will catch it some place. All damage to other points was detected and repaired before trains went out. Between Potter and Antelope water was very bad and from Big Springs up the valley of Platte, it covered the track for miles. It all came from the surface from the heavy rains. C. B. & St. Joe has been under water for nearly four weeks, while the Rock Island and Pacific has hardly been in on time for two weeks, sometimes two days behind. Northwestern a little better, but is now tied up for a couple of days. We have never been over twelve hours late and then only once. The road does not earn what it ought to, and you will have to come to my policy to move all the wheels if we have to do it for a time at cost. Once the business with us, it will never leave us. Salt Lake gets its freight now by Central Pacific and San Francisco cheaper than we can deliver it. Kansas Pacific delivers freight to Denver cheaper than we do. The country is making up to it. Look at the speeches of Arnold, Oglesby, White, Judd and hear the press. Gen. Crocker's response to the speech of Trumbull that C.P. would carry freight to San Francisco, not Sacramento, as cheap as we dare to. Passenger fare \$100- emigrant fare \$50 and freight for 2 1/2 cents per ton per mile. Now all such talk should be answered, that we are ready to pro rata with them at any rate to Sacramento, but we do not intend to pro rata the U.P.R.R. against their one horse boats.

Central Pacific do not intend to buy the road to Ogden and pay a fair price for it if they can help it; but do intend to make a row, to fight for bonds to Ogden, go to Congress, lie, howl and finally, steal the road. I never could fight on that line and win while their policy is all aggressive."

Messrs. Duff, Bushnell and Price came West to settle up matters as far as possible. Mr. Price was unable to accompany them and Bushnell settled with all the contractors, giving long time paper and some cash. They also agreed upon Mr. C. G. Hammond as General Superintendent to take hold on August 1st. They consulted with me about this appointment. I was very much opposed to it and was very anxious to have Snyder retained, but Snyder was very positive and determined to leave. I did not blame him for he had been treated outrageously. His work upon the road had been very able and had virtually saved the running department. When everyone was demoralized in the East, Snyder kept fighting his battles and holding the location in tact, but Mr. John Duff, for some reason, got a great prejudice against him. The person they selected and his superintendent,

Mr. Mead, only lasted a very short time. They were complete failures.

<sup>1869</sup> On July 21st, Mr. Morris wrote me from Wahsatch as follows:

"Col. Hammond has been introduced to D. W. Warren and Campbell, the ticket agent on this end of the road, as the General Superintendent, and the man from whom they were to receive orders, and to whom they were to report by Mr. Bushnell.

Yesterday evening, Capt. T. H. Bates, Col. Stevenson, late of the C. P. Surveys, J. F. Nounan and brother and Mr. Green, firm of Grant and Hill, came up to Wahsatch to examine for affidavit <sup>in</sup> Nounan's work.

Jno. Green was ashamed of his company and ran away. I understand Nounan intends making strong effort on evidence secured by experts and is using such men as Bates, Stevenson, Hubbard and Lawrence.

Hubbard notified me if I could not pay more wages, he would be obliged to leave, and gave me two days notice. I told him to quit.

He knows nothing but clerking and is too thick-headed to make an engineer or good railroad man.

Moscrip quit because the work was too hard and the grub good for nothing. I have written East for a man who was with me some three years in the East and who is good on masonry and foundations.

It might be well for us to have some rebutting evidence of experts on Nounan's work. Eicholtz is here and it might be well to have him and some others examine the work. Carmichael did a great deal of the work after it was evident Nounan would fail and his evidence and that of his foreman would have great weight. Mr. Reed could get his evidence. It might be well to look after it a little as the case comes up in September."

The President appointed Mr. James F. Wilson of Fairfield, Iowa, as Government Director and on July 24th, I received the following letter from Mr. Price from Davenport:

"Yours of the 21st received last evening. I am very sorry that the afflicting circumstances by which we have been surrounded prevent our joining you before you started west.

I need make no comments now on the recent movements of the U.R.R.R. Co. I shall, however, if alive, be at the meeting on the 18th of August, and hope to see you and Wilson there. By the way that meeting was fixed on that day on my motion, but the place is not named, that part being left to the discretion of the President, who is to name the place and give the members of the board 20 days notice of the same. This notice will have to come pretty soon to comply with the working of the resolution."

On July 25th I received the following letter from Mr. U. H. Painter from West Chester, Pa:-

"I have been in Washington a week with Rollins and Wade at work on the bonds. By the aid of Wade we got out up to 1020, and Cox agreed to stand by whether Boutwell would on the other, and then he, Boutwell, referred it all to Hoar, and unless he gives good opinion, Boutwell will refer it all back to Congress. If Hoar does the square thing, he will get the bonds issued and most of them delivered. I enclose the two opinions. Bartlett's we quietly suppressed, and put in Cuahings, which Rollins, Hazard and myself set up. I gave Hazard a good sound dose about their treatment of you; he is sound now, says they must keep faith with you or he will resign. Ames told him some things in a pretty plain way. This Hammond matter must be squelched. Dont fail to have Wilson at the next meeting. I'll be at the Parker House. Tell him to come there. Wade will be on hand and O.K."

On July 26th, Mr. F. S. Hodges wrote me from Boston as follows:-

"I have to acknowledge yours of the 19th. Soon after I entered this office I felt that you labored under great disadvantage in knowing neither the intentions of the directors nor their individual feelings towards yourself. I therefore concluded to state what came to my knowledge and to let you draw your own inferences generally.

Late events, the appointment of Mr. Hammond, &c. put you in possession

of facts, of which you are the best judge.

There now seems to be a desire to push the road through to lowest rates, and to help it along in strong hopes of its paying. I think that the principle stockholders will probably pledge their personal credit, and to an extent to ruin themselves in the event of a failure of the road. If now, they will all unite in so doing, I hope all will be well; and it is I think the fear that they cannot all be made to thus co-operate which makes two or three of the leading men so blue. All will be here at the end of this week; they have a big payment to make or stave off, and on the 18th of August is the time for quarterly Director's meeting. By that time a change will have taken place either for better or worse.

At the election of Directors last May, it was generally understood that John R. Duff, who was then elected and placed in several committees, was to resign in your favor as soon as your duties would allow you to come East. You may be here by the 18th, in which case I can speak instead of writing what I think in relation to what has taken place and future events.

It is understood now that some one of those elected last Spring is to resign in favor of James Brooks, who is thus to appear again in the board as a company director instead of one for the Government. This will undoubtedly take place next meeting.

I wrote you a short time ago. You will perceive in that letter that a line has been interlined. By omitting this line the inference I intended will be more palpable. I inserted it to guard against this, in case it fell into other hands.

A meeting was held with C. P. Huntington in relation to setting up on the basis of selling from 1040<sup>W.M.</sup> to Promontory Summit at your valuation of \$87,000 &c. odd per mile, and of taking off of their hands the road from 1040 to Corinne at \$110,000 per mile, thus making Corinne the point of junction. This C. P. H. refused and thus the matter stands. What the next move will be one cannot tell. I don't suppose that they can build another line to Ogden of their own with Brigham. Do you think they will try to take the road by force?"

Young against them.

An injunction was served against the company on July 26th.

On July 25th, I went to Salt Lake with Duff and Bushnell for the purpose of settling up everything possible on the lines.

On July 28th, I wrote Mr. Oliver Ames from Salt Lake as follows:

"I am in receipt of yours of July 18th. I came out last Thursday expecting Price and Harris, Snyder and others to accompany me. Price had a grand child die which stopped him, Snyder was removed and did not think it proper; therefore, I brought Harris and Son, Admiral Farragut, &c.

I have been here three days attending to our land matters; have made arrangements to extend government surveys east along our line to east line of Utah; and raised several questions here important to us. The Commissioner of the general land office gives the following instructions: "Should it appear that parties have made bona fide settlements under the pre-emption laws" on any of the lands prior to May 24, 1869 (date of receipt of instructions ordering withdrawal of lands from market) such settlers will be permitted to prove up and enter their claims either on odd or even numbered sections at the rate of \$1.25 per acre."

Under these instructions, most of the land on odd sections will, or is being taken up. The instructions are a direct violation of Sec. 7, law of 62 and Sec. 5 of 64, and the question should be immediately raised if we want to save trouble. I telegraphed Mr. Duff about it but do not know whether he was in Omaha or not. I did not see Mr. Bushnell going or coming.

Noonan's suit will come off in September and he will swear against us terribly. All here are interested in having him succeed as he owes every one.

The work that we have done outside of ballasting west of Piedmont amounts to very little since I came out, but we are now virtually doing nothing but I expect instructions from Duff or orders to take materials. It seems it is still in the hands of construction department. We have got to spend a good deal of money on the road. I have made secure all small bridges by piling them, by putting in the straining beam bridges on Sulphur, but the masonry put up for the truss bridges does not fit. Bridges are too short for masonry. I never saw such work, nor no other man. Mr. Harris examined them all with me. He thinks road bed good, first rate. Bridges bad, but says

I am taking the proper way to get rid of them and make them safe. I intend now as soon as I can get material to build Green River, Blacks Fork 3, Ham's Fork, Bear River, Muddy and a few other crossings where we have temporary work, the cost will be \$10,000 to \$12,000 to a bridge.

As to shops and round houses, I have done nothing. Estimates were sent in but no answer. We will have to build round houses at Bryan or near there; also, at end of road wherever it may be. Shops, we ought to get along without if possible until we are rich, and use temporary ones. I might put up Blacksmiths shops at each place, but will consult Mr. Hammond as to what he needs now. The money to do all this new work must come from the East. The running department, I think, will have all it can do to take care of itself.

If you expect to get the road accepted before this work is done, by the "five", I doubt if you can do it, and it will take a long time yet to do it --all the summer and fall. We have yet done nothing as to bringing line up to adopted grade, taking out temporary work in cuts, filling the large temporary trestles, putting in the truss bridges over streams, moved or replaced any bridges or culverts with masonry. (I prefer pile bridges, good ones, at present). Nothing done on shops or round houses: none now for 400 miles, &c.

On all these points I know commission is to be specially instructed; they will be told to see what has been done, since report of Warren and estimate balance on rolling stock we will have sufficient; also, on machine shop, if they were only well distributed.

We have now got most all bridges and culverts safe. I commenced at Green River with pile driver and strengthened all, when they needed it the old pile bridges more were driven. I could take a crow bar and lift the pile right out- not a single bridge was good. Nor would a single one fit the masonry it was built for. I am going to use the light red sand stone for pier and build for about \$12 1/2 per cubic yard, old contract was \$27 1/2, but Mr. Duff thinks best to work by the day; says when we begin, the company must understand that money is to come from Boston; therefore wants estimates laid before the Board, you have most of them. There is a large amount of timber and lumber in woods here yet, paid for I am told, but it is being stolen, so the men who get it out informs me. We ought to haul it to line of road immediately. Can do it cheap now as teams are plenty. We have about enough lumber along line of road for our snow fences.

I am informed out here that Davis will commence suit in New York under what is called the Davis contract, west of Oakes Ames' contract. At any rate testimony, examinations, &c. are being made by that interest for some purpose."

[869]

On July 26, I wired Mr. John Duff from Salt Lake as follows:-

"Have arranged to have government surveys extended east to Bear River to include Weber, Echo and Bear River valleys and coal banks near Evanston. Under instructions of Commissioner of land office, settlements on odd sections prior to May 24, 1869, are held to give right to settlers to enter land and it is being done extensively. Have our attorneys raise question of our rights at once under Sec. 7 of law of 62 and Sec. 5 of law of 64."

On my return from Salt Lake, I had an interview with Mr. Hammond going fully into everything connected with the Union Pacific in relation to his department. I saw that he had come upon the road with a great deal of prejudice against it and against those connected with it, but I told him very plainly that after he had had a year's experience on the road, he would change his mind in relation to many things. He seemed to rather resent it, but I told him that I had been connected with the property since 1853, up to date, and that I knew it from top to bottom and I took just as high ground about matters as he did.

On August 5th, Mr. Williams wrote me from Boston as follows:

"Yours of July 19th to me as Treasurer U.P.R.R. but private, and of 21st to me as Treasurer U.P.R.R.Co. was duly received.

Your letters are so discouraging I am glad to keep them private, we have a heavy load here in raising money to meet urgent payments and Col. Hammond must contrive to sell enough of surplus material to relieve matters with you, I hope he is doing it.

On some accounts Snyder's removal may be bad, but the appointment of Hammond certainly adds great confidence to our enterprise, he is so well-known and respected everywhere.

Shall be pleased to see you here on 19th and hope that soon after you will go West with the Eminent Citizens and Mr. Duff, he having authority as I suppose he will, to fix point of junction and sale of part of road to C. P. R. R. but they act so strangely looks as though they did not seem to agree to anything fair; then you will all hurry back and we all go to Washington and unite on all our bonds."

1869  
On August 7th, from Council Bluffs, I wrote Mr. Hammond as follows:

"As we need overhead supply pipe at Piedmont, Castle Rock, Echo, Uintah and possibly Devil's Gate, would it not be better to use the 2 1/2 inch pipe at Echo for those stations and purchase 3 inch sleeve joint cast iron pipe for Rawlins? The pipe at Echo I believe is wrought iron. Cast iron is much better for Rawlins.

Our estimate for ditch, 3 ft. on top, 1 ft. on bottom, 3 1/2 ft. deep, is 5107 cubic yards earth, exc. 20,000 ft. 3 in. cast iron pipe, 3/8 thick, sleeve joint, 5 lbs. lead to 10 ft. of pipe, 3 elbows."

On August 7th, Mr. Hazard wrote me from Piece Dale, as follows:

"Yours of 28th inst. from Salt Lake is just received. I am glad to hear from you on these matters, and had been expecting to meet and consult you fully in regard to them and some other matters on the 18th when I hope you will be in Boston to attend meeting of the directors called for that day. Mr. Bushnell seems to think it very important to get to Corinne to secure the Montana trade which he thinks must come there in the winter. By his advice an offer of compromise was made to C. P. to sell the road from Ogden to Promnntory Point at your estimate of prime cost to contractor I think at \$85 or \$87,000 per mile.

The effect of the offer is good perhaps. I hold that we are entitled to the actual cost to the company or whatever the U.P. pays under its contract, and further that the contract having been made under the erroneous belief, both parties fully stated at the time that as a part of the understanding of our parting with this piece of road the C.P. would take the whole loss of the deficiency of \$2,600,000 of subsidy bonds. The contract in that respect must be equitably adjusted to conform with the actual facts. Our finances still work very hard. The immense outlay on the latter portion of the road, in which we all think we must have been swindled on a magnificent scale, and the large investment in materials not wanted for a very long time if at all, have involved us in debt to an amount that takes our utmost ability to cope with.

I hope, however, to see you in about ten days and shall be glad to have a visit from you at my house."

On August 7th, I wrote to Mr. Ames from Council Bluffs as follows:

"I returned today from my trip over the road. While out west arranged to commence work on the following bridges: Green River, 3 crossings, Black's Fork, Bear River, Ham's Fork and Muddy; Our estimates of the cost of this work are as follows:

Green River,	600 ft. long	\$20,000.
2nd crossing Black's Fork	300 ft. long	12,000.
3rd crossing " " "	450 ft. long	14,235.
4th " " "	450 ft. long	14,235.
1 " Ham's Fork	150 ft. long	2,000.
1 " Muddy	150 ft. long	5,000.
1 " Bear River	600 ft. long	14,500.

The 2nd and 3rd crossing of Black's Fork I am now inclined to reduce to 300 ft. which reduces the estimate somewhat and found it difficult to get the labor to perform work on account of distrust as to prompt pay but I assured them of full pay regularly every month and must do it to complete the work promptly and economically. As far as practicable will use force on road in driving piles, putting up trusses, &c. I have made no arrangements as yet to complete Cheyenne blacksmith shop, most of material is out for this and we ought to put it under roof to save work already done. Lumber, mortar and part stone is on ground and building two-thirds up. It will cost to complete ten to twelve thousand dollars."

<sup>1869</sup>  
On August 7th I wrote Mr. J. G. Webster from Council Bluffs as follows:

"In your estimate for snow fence, what kind did you estimate for? Was it for double fence both sides of cuts or what?

I want a careful estimate from end of 400th mile post to Green River, also estimate of amount of material to be moved on low cuts, so that I can return it to Mr. Hammond by the 25th. It better be given in length; also an estimate of material in No. of feet, B. M. If you need some one to help get it up, get some one and be sure to have it in Omaha so that it can be returned by that time; also, send your plans of fence."

On August 9th, I wrote Mr. C. G. Hammond from Council Bluffs, as follows:

"I am obliged to go East this week. Plans for snow fence and sheds will be sent you by Mr. House. A portion of the fence can be permanent and portion moveable. You will find if we have heavy snows you will want to use a good deal of portable fence where permanent fence covers from drifts. I prefer the wooden snow shed, with roof in sections, bolted to the frame so that we can remove the roof in summer. We give estimate setting price to material which may be high. We have in hands of contractors which, no doubt will fall to company, sufficient to build fence; hence, present expenditure will be about cost of making and setting up.

The division engineers have made measurements of each cut. All cuts of less than six feet high I prefer to take out at a slope of one-fourth to one, or at a less angle, moving the earth into a ridge 100 feet from cut. We found this to work well last winter and earth can be moved at about 25¢ per cubic yard.

The fence, in some places, should be as high as 10 ft. and not less than 5 ft. This is a matter of detail which we will have to decide with the engineers and road masters who were through the snow blockade of last winter. East of the 400th mile post I have not estimated for fence as the snow obstruction will be very little, if any.

On the Laramie division, there is a large amount of portable fence on hand, which should be deducted from the amount estimated for. Mr. Fillimore thought there was enough to fence two-thirds of his division."

On August 9th, Mr. Morris wrote me from Wahsatch as follows:

"I went to Salt Lake City and have sent out about 40 men. Have arranged with a Mormon foreman to send out all the men can get. Have had a few posters printed and circulated through the settlements where the grasshoppers have been bad, and men are out of work.

It is quite time some prompt action was taken, as there are eight or ten sections in Bridger division where there are but one and two men, and sometimes only the foreman. The gravel trains have from 10 to 25 men and we are losing money all the time by not working trains up to its full capacity. I have arranged to have stone quarried and loaded on cars at five dollars per cubic yard. I can make no fair prices with the stone cutters, but think if we will import some things will look differently. I have two pile drivers, one steam and one horse driver rigged, and go to work tomorrow on Black's Fork Bridge, 110. If it can possibly be done, it would be well now to pay off and send out of the country all the bed men we have at work on section and fill their places with the Mormons who have families to keep them steady. There is a man who has bid for the masonry in Box Culverts at \$2.50 per yard, and we can now load the stone for that kind of work at the same time we are loading the range work."

We can use our section men and gravel train men in filling up trestle work during the winter, if we put in a few of the culverts before the winter sets in. There are also some culverts which must be put in before winter, either with plank and timber or stone in places where there are no openings now. I have arranged for widening embankments and for making new channels for rivers at 25 and 20 cts. per yard to good prompt and reliable men, scraper work. One man begins tomorrow and the others as soon as possible. I have arranged with Granger to let me have piles at 25 cts. per lin. ft. and feel now quite confident of driving the piles for foundations at less than 60 cts.

I will draw on you for money to pay my rolls for May, June and July. You have the May and June rolls, the amount of the July roll is \$810,000.

I telegraphed you for passes, masons, stonecutters, cement and lime. Will begin hauling stone for bridges by middle of week and hope to run from five to eight cars east daily."

The men in the Union Pacific who were friendly with Durant were very much opposed to my going into the Board. I had made up my mind, as soon as I got my work of completing the Union Pacific done, that I would leave the company and did not care to have any fight in the matter, but my friends were determined that I should go into the Board and they were very anxious that I should be present at the meeting.

We were considering the question of shipping California fruits to Mr. Frank Hyde the East and on August 10th, I wrote the following letter to me on this subject:

New York, August 10, 1869.

"You are undoubtedly aware of the considerable interest being manifested in both California and the Eastern States in the matter of shipping fine fruits from California to the States.

I am satisfied that if the fruit is properly put up it can be successfully sent here. If this result can be accomplished, the trade would be measured by the capacity of California to furnish supplies.

Such grapes as are raised in open air in California are only raised in hot-houses here, and imported. The price since we have been in the business has never been below 50 cents, and runs in some seasons of the year as high as \$2.00 per pound. (?)

The price there as you will see by enclosed ranges from 3 to 18 cents per pound, and we are informed by an extensive wine house of San Francisco that they bought many tons last year of handsome fruit at \$15 per ton, or three quarters of a cent a pound.

We think by going there and spending a month in the leading fruit sections and instructing them in the matter of preparing and packing fruit for transportation for long distances, we can contribute much towards the success of the business-thereby benefiting the fruit growers, the railroads and last (not least) ourselves. We think we could dispose of these fruits during the season at least two car-loads per day. For our interest rest in the business, we are willing to risk the expense of going there except the railroad fare. Two lines at this end (the Erie and Pa. Central) have offered us transportation to Chicago and Omaha. Can you send me the balance of the way, or at least over your road and return?"

I sent Mr. Hyde the passes and it resulted in shipping the fruit that season. On August 10th I also received the following letter from Mr. Oliver Ames from North Easton:

"The examination of the road by the committee of Eminent citizens seems to be the only thing that we now require to have the bonds issued to the road. I understand that this committee will be only guided by the ability of the road to transact the business required of it with safety and dispatch. If the road is simply first-class as is the custom to build roads, it will be accepted.

We can make no progress in settling up with creditors for bonds or certificates, nor with the Central Pacific till the road is accepted.

Can't we send them over the road with a surety of their making a favorable report? Reed says the road is running very well and I understand that for five or ten years these wooden bridges are quite as good as anything that can be substituted for them, and will be satisfactory to the Committee. Let me hear from you."

I had not gotten our work far enough completed yet to have this commission examine it. It required a month at least to finish up a great deal of the work that was under construction and I was anxious to have the date put off until all this work was settled. I knew that a partly completed estimate would not show such a sum as when it was entirely completed.

On August 11th I received the following letter from Mr. Dillon from New York:

"Your letter of July 29th is at hand, I hardly know what to say to you as things have changed so much since I saw you. I am sorry that Mr. Snyder was discharged, I knew nothing of it until it was done.

After the election I told them all that I must attend to my own private matters. I have done so, have not been to Boston but a few times since. I was in Boston last week, will go this evening again to look after the settlements of those old contracts. The Boston folks feel that they have a heavy load to carry, they are determined to carry it if possible. I hope they can give me the amount we owe, we must put the road in good shape and do it with as little money as possible.

When I return from Boston again you will hear from me, we must all pull together or the ship will sink".

On August 12th, I received the following letter from Mr. Ames from North Easton:-

"We have a telegram from Secy. of Interior saying that it was expected that the Committee of Eminent Citizens were expected to go out about the 20th of August to examine the road, and desires to send them out and asks if we are ready to receive them, and if not when we will be ready. Our people here are generally in favor of having them sent out. We have, I understand, our bridges <sup>completed</sup> on the line of the road, are doing what we can at all the places to put the road in order, and excavators at work to put up the embankments and will have them all ready before the season closes up our work.

The instructions of this commission are in the law appointing them to the place. If they are practical, common-sense men, seeing the material on the line of road, and we at work putting it in report that the road is a first-class road, and entitled to the bonds withheld by Government. We want to fix the point of junction between U. P. and Central. Huntington telegraphed us yesterday and we have proposed that you and Supt. Hammond go out and fix this point at as early a day as possible. You better know the country and the point can be as understandingly fixed by you and our Supt. as any one.

We have now here the Mormon Bishops, Warner and Cheever and Case-ments wanting settlements. The amount of bills coming down upon us is fright ful and we have no money to pay, all the resources of the company have been used up, and till we can get a settlement from Central Pacific for the road west of Ogden, and sell some of our material on hand, we have nothing but our private credit which we have stretched to the utmost for the road already. We hoped to sell our iron to Evans for his Denver Branch which he said he had raised the money for by sale of his bonds, but we have heard nothing from him lately and fear that this has fallen through. We supposed when the road got to running that we should have resources from this that would make us comparatively easy--earning about \$700,000 per month, we supposed that from 3 to 400,000 per month would be derived from this source, and our labor would be paid off in this way, and the road put in order.

and I do not understand why a large amount of money cannot be had from our earnings, when we have so much material on hand and no necessity for anything but simple labor."

On August 12th, I received the following letter from Mr. Snyder from Omaha:

"Mr. Hoxie and I expected you on here yesterday or would have gone to Council Bluffs to see you. We are glad that you go to Boston to explain matters here. John Duff will give his resume which we are satisfied will be as false as many of his statements here."

Duff's intention is to make a clean sweep. Hammond is figuring that way daily. Hammond is to get \$20,000, C. W. Head \$21,000 per year, H. and I have drawn on Williams, Treasurer, for balances due us. Duff promised me that our accounts should be paid as per vouchers rendered on or before July 28th. If they are not paid we propose to try the merits of the claims in such manner as we think most likely to secure collection."

The discharge of Mr. Snyder and Hoxie, of course, made them indignant and on August 13th, I received the following letter from Mr. Hoxie from Omaha:

"Had I known you were going East, I should have gone to Council Bluffs to meet you. Not having seen you since I was discharged, I can't write half what I desire. I have drawn for about \$2300 that being amount due me for salary up to July 21st, 1869. I shall claim and collect pay at \$5000 per annum until I am paid. No man can be discharged until he is paid. The longer they delay paying, the better for me. Then I have a claim on the assignment of the H. M. Hoxie contract for a large amount. The assignment says I am to have \$5000 cash \$50,000. Original stock which is worth about \$35,000. I am going to have my money and that soon or make trouble. I am to have enough paper in my hands to make some trouble. I must have my money.

I write this to you personally and not officially as I know you are my friend. I shall keep still until you are paid and then I will go for John Duff who is a notorious liar in this country.

When you are paid let me know that I may open my batteries.

Wonder how they would like us to sue them and claim same amount paid now to Head and Hammond? Wonder if they want Congress to know amount of dividends paid on Credit Mobilier 10th and 17th of June?

I have original paper, also more that can be produced. Enough to beat Mr. Duff. Please write me soon as you are secure or telegraph in cipher, then I will go for them."

On August 14th, I received the following letter from Mr. Snyder from Omaha:-

"C. G. Hammond is now the General Supt. of the U.P.R.R. at salary of \$10,000 or \$12,000. Nichols, son-in-law of Hammond is purchasing and siding agent of the road at good round salary. Mr. Down of Chicago, friend of the family circle, is cashier. Nichols, purchaser, is of the firm of Nichols and Mann, Railway Supply agents, Chicago and it has been always understood that C. G. H. was a silent member of the firm.

Nichols got his start in life while purchaser for the C. B. and Q. R. under Hammond's administration. This road is now selling N. & M. ten car-loads of scrap, wrought and cast iron which ought to be used here, if it is any object to save money. Of course, all R. R. supplies that N. & M. have for sale will be bought of them as needed.

If this is not a tolerably complete "ring" then I don't understand what they are figuring for. I get the information quite direct that N. & M. were paid \$18,000 on their account while all other parties are forced to take four months paper.

G. W. Frost was promised by Duff a position on road, on or before August 21st without fail. The Land Agency in place of Davis was assured him. Duff started so many things here that it is hard to tell what he meant

Inserted Page 1008:

I attended the meeting of the Board of Directors, having been elected on August 18th and went thoroughly into the condition of affairs on the road, calling attention to my numerous letters and protests and the failure of the company to appreciate them; their excuse was

I told them that we must put the road up now in first-class condition before the eminent citizens committee made their examination; that I could do it if money was given me and called their attention to the fact that my estimates up to the end of the Ames contract showed over eleven millions of dollars due from construction Company for work not done; that from end of Ames contract to Fromontory there was due over four millions and that the amount we were to receive from the Central Pacific for our road west of Ogden was over four million dollars and that it was their duty to bring the construction company to time and to settle with the Central Pacific; that if they could not make the settlement, I could. Their answer was that they could not force Durant and his following to pay up, that the Boston stockholders had put up every dollar they had and had exhausted their credit. The report of the Commission, if it was favorable, would give us three million of bonds. I was certain of two matters--I could bring road to a condition that it would pass. Mr. Ames, Mr. Dillon and the Government directors supplanted me in my position and they agreed to make a good effort to raise the money needed. I told them Hammond and Mead had no idea of economy in operating a road; they had come from roads that had plenty of funds; that they were putting on new men and that they would soon see the result. Mr. Duff was bitter on Snyder and Hoxie but I called his attention to the fact that they had accomplished a great deal; held their force under good discipline and run the road ~~maintain their~~ credit for three months without a cent from Boston, whilst Hammond refused to raise a cent and demanded prompt payment and was not earning any where near the net money Snyder and Hoxie did. I also succeeded in ~~to making~~ to making rates so as to take through business from the steamships and to open up the fruit and timber business all along the line. I said we had a great property, a great future and they only had to stand by it, that it would bring us out. I straightened out many things and wiped out numerous stories manufactured for a purpose and called their attention to the fact that with all the obstacles and fights in New York, Washington and the demoralization caused by Durant and Seymour, that we had been able to hold our organization in tact and complete the road to the point selected by us, building in twelve months 556 miles of main line and the additional sidings, &c. This gave the directors a new view of matters and they took new courage. I went back to the work determined to close up our work as rapidly as possible and John F. Wilson went to Washington to look into the bond question.

in promising Frost the place.

I have done considerable since my discharge to sustain the credit of the road here and at Chicago. Every business man wants my views on future prospects. I want to see the road a success, but my hopes have not been strengthened during the past six weeks. My honest opinion is that you will do well to dispose of your interest in the road. Expect to leave here soon as I get balance of salary due.

Will not go to work again before October. Will retain residence here some months yet."

This letter shows the commencement of the biggest combination for benefiting the Hammond outfit, so far as the operating of the road was concerned, that was ever upon it, as the future statements will show.

Insert ① On August 16th, <sup>1869</sup> I received the following letter from Mr. Henry Farnam, my former employer who furnished me with the money for making a reconnaissance on the Union Pacific from 1853 to 1860:

New Haven, Connecticut.

"I received a letter this morning from your brother N. r. of Council Bluffs in which he said that you would be in Boston at the office of the U.I.R.R. Company the 7th and 18th inst. and that soon after that time would leave Boston for Washington. As soon as I received your brother's letter, I telegraphed you asking you if you could come to New Haven and see me, if not, when and where I could see you. I am very desirous to see you for more reasons than one. In the first place I would like to have you come to my house and make me a visit and in the next place I want to see you for a moment about a business matter. I must, if possible, see you before you go to Washington, and I think you can stop off on your way without losing any time. You know the route through New Haven is the shortest to New York, and of course to Washington and if you can do no more than stop off and spend the night with me I should be greatly obliged, or if you cannot do this, stop over a single train. The longer you stop the better we should ~~at~~ like it but a short visit would be better than none.

I beg you will not decline but let me know either by letter or telegraph what train you will come on and I will meet you at the station. My residence is 47 Hillhouse Avenue."

When I finished my business in Boston, I went to New Haven and saw Mr. Farnam and all his family. George, one of his sons, had been with me in one of my engineering corps. Mr. Farnam was a very strong, able, well balanced man. He and Sheffield had built the Rock Island road, and it was Durant and Farnam who went West of the Missouri River to build the M. & M. Road but Mr. Durant so involved Mr. Farnam that when they commenced to build to Iowa City, Mr. Farnam declined to have anything more to do with Durant. In their raising money, etc., Mr. Farnam had placed in the hands of Mr. Durant a good many of his securities which it took him a long time to recover, if he ever did recover them. He did not have any confidence in Durant and would not have anything to do with the Union Pacific as long as he was connected with it, and he was greatly surprised to think that I had managed to get through so well with the Union Pacific when Durant was connected with it. I explained to Mr. Farnam a good many of the ups and

downs we had and the great cost it had been to us and the great detriment Durant had been to the road. When we put our land upon the market, we land agreed to take in payment for it the ten millions of grant bonds which had been issued by the company, and the members of the company who had taken to parties proposing to buy our land. these bonds were very anxious that I should dispose of their bonds. A received the following letter from Mr. Davis in regard to this matter which goes fully into detail about the using of bonds and the purchase of the land:

Omaha, August 16, 1869.

"Yours of the 9th inst. received. I have just received a letter from Mr. Duff, who sends twenty-five bonds for sale; he writes: 'You will not have any bonds sold in your land-office except those that are sent by me or such as I advise you about.' I think he would allow me to sell your bonds if you mention it to him, Sec. 23, 17-9 was a section selected by Mr. Dillon who wished two sections, but the selection was made before the appraisal, and he may not like the price.

I can do better for you in my judgment than to take that land although it is worth the price. Some parties are selling bonds at .70 they may even go lower. I shall be glad to do anything for you that I can.

The section I selected for General Sherman is Sec. 35, T. 18, R. r., East; it is a fair average tract of bottom land. I will write to Mr. Duff, and give him the Nos. of the Section, also to General Sherman. The matter had probably better be arranged now.

I expect the question of salaries for self and my employees will come up at the meeting of the board.

P. S. "As soon as N.P. sends me your bonds I will confer with him as to selling and entering."

I had taken more of these bonds than I was able to carry and I had put some of them with Davis to sell to parties buying land.

On August 19th, <sup>(1869)</sup> Mr. Snyder wired me that Hoxie and his drafts for service had been protested by the company.

While in Boston, I took up this matter of the payment of Hoxie and Snyder and told them the importance of settling with them without any friction; that there had been scandal enough in relation to the railroad and that they knew a great many things which would be of great detriment to us and to the company, and I arranged for their settlement. The trouble was there was no indisposition on the part of the company to settle ~~only~~ they were short of money and they put off everyone whom they could.

On August 20th, Mr. Morris wrote me as follows in relation to work on the road:

Wahsatch:

"As directed by your letter of August 9th, I have sent to Mr. House the length of snow fence needed to protect all cuts on the line over 6 feet deep or through rock or loose rock. Also the quantity of earth to be removed to make all earth cuts of less height than six by 20 feet wide in bottom. I met Mr. Mead, the Asst. Genl. Supt. at Bryan; and went with him to Promontory. Gave him all the information as to the road bed and superstructure I could. Told him the general plan you intended following for snow, and with the bridges over the large streams. He asked many questions and expressed himself very much pleased with the prospect. He is very anxious to have the work pushed vigorously and told me if I needed anything he could furnish to let him know at once.

He seemed very anxious to see you and arrange fully for all the work which can be done this year. The piles are all driven for one pier at bridge 110 over Black's Fork, nearly all for the East abutment of same bridge.

I have a gang of men digging out the foundations, and hope to have the masonry started by the middle of next week. The masons and stone-cutters who came from Omaha brought no tools with them and I had to have quite a lot made and furnish others from the construction House at Echo. This caused a delay of a day or so in getting to work. I have received no cement or lime, and when I found my men here without either I ordered and received a carload from Weber Canon and we are working with that lime. Mr. Mead ordered a car of cement sent at once. Stone is going regularly and I have begun to ship to Webster. I have contracted with a very good man named John Jordan for the masonry of one of the Black's Fork bridges. He is to quarry the stone, dress them and put them up for \$12 per cubic yard. He put up the only good work I saw on construction, and is a first rate mason, a Mormon and a good manager. I have contracted for stone to be delivered on the cars at the quarry at \$5 per cubic yd. and have put Curtis there to inspect and measure them.

I have contracted for the backing stone to be dressed for \$3 per cubic yard, and face stone at \$5 per cubic yard. I have an offer to lay rubble work in box, and arch culvert abutment walls at \$12.50 per cubic yard, company furnishing stone and lime. I think it would be well to put up some of these this year, so we can work our gravel trains and section men through the winter, when wages will be low and men plenty. I have a few stone cutters working by the foot face measure, 50 cts. I pay, this is a little less than \$5 per cubic yard.

I hope soon to have enough to dispense entirely with those sent from Omaha, and who are working by the day or force them to cut by the foot. I have agreed with a man for scraper work in making out cuts for snow protection and widening embankments up to six feet in height; 20 cts. per yard for the cuts and 25 cents for widening embankments on account of the small quantity of work in a place. He will begin work with 30 teams in about a week. Another man begins at once next Tuesday with from 10 to 20 teams. Another man will go to work any time I will let him, all at same price. Then I have one man at work at the changes in the channel, and he is to do some widening of embankments also. I have a fair organization and can extend it if you think best so as to widen all embankments and take out all cuts on my work. I have shipped from Uintah about 200 men to Bridger division about 90 per cent have stayed, that is a success."

Durant, McComb, Jenks and other disgruntled people connected with the Union Pacific had taken action together to hamper the Union Pacific all they possibly could and they got out many injunctions. I had a letter from Mr U. H. Painter of Boston in which he said that Mr. Oakes Ames said both Snyder and Hoxie should receive every dollar that was owing them.

On August 30th, Mr. Morris wrote me again on the condition of the repairs of the road and the difficulty of settling up satisfactorily with everyone as follows:

Wahsatch:

"The piles for two of the pieces of masonry for bridge No. 110 over Black's Fork are driven and the drivers are now at work on bridge 118.

The men who are digging out foundations are at work on bridge 110 lowering the ground so as to cap and plank the piles.

Smith has some six or eight at work near Aspen taking out cuts and widening banks. Darby has twenty teams making new channel and widening banks, between Granger and Bryan. Bryan puts on twenty teams today between Granger and Church Buttes. Munson and Co. shipped 60 teams to do that work between Wahsatch and Aspen, McCoy goes to work at Green River and works to Bryan this week with 20 teams.

Sharp has gotten fairly to work on his quarry and is shipping from five to eight cars per day of stone. Van Dyke the mason sent from Omaha has fairly begun, and is doing well, but the work is costing too much. However, has hot had a fair chance, as he was short of tools and needed to get many things arranged. But now he has a fair start and should do well. We should go at the alteration of line at Clay Bluffs at once, and also at any small culverts which are to be put in. I can put a gang of masons on the small culverts whih are to be put in. I can put a gang of masons on the small culverts as soon as you will order it. I had quite a long correspondence with Mr. J. C. Little, the Secy. of the Weber Canon Road Co., which culminated in an appointment to meet him and the President, Bishop C. W. West, at Ogden last Wednesday. They state the case in this way-- the road cost, (cash paid out) \$64,000. They had just completed it and had it working about six months when the R. R Co. destroyed it. Their charter requires that the road shall be built all the way on the north side of the river and they have not been able to collect toll, since July 1868. They claim the cost of the road and 10 per cent interest on said cost, which is \$70,0400. For this they will either transfer all the stock of the road to the R. R. Co. giving them the entire control of the road or they will receipt the company for all damages past and present and secure them against all liabilities to build or repair any road in the canon.

Their claim for damage will be a large one and they had arranged to sue the company when I wrote them as directed by you.

It will cost quite a nice little sum of money to rebuild the road.

The work done by the construction department costing over \$80000 and we will have harder work to do if we keep the line on the north side of the river all the way.

The cost of this cannot be known until a careful survey should be made. My estimates and pay rolls for labor in August will go in by the 6th of September and I will be in Omaha about that time, should nothing prevent. My father will reach Chicago on the 5th of September."

On August 30th, <sup>1869</sup> Mr. F. S. Hodges wrote me from Roxbury as follows:

"I have before me yours of 20th and 27th inst. One was received in the interim in relation to conversation with Mr. Wilson, which was not received until after Mr. W. had left. I would suggest that you address me care of Washington National Bank. I am deeply grieved to hear of your illness. I was in hopes that you would not devote so much of your time to the road after its completion as you did before for I have felt that you required rest after your labors of the past year. Now that you are at home once more with your family, you must feel like enjoying its comforts. I wish that I could encourage you by good accounts of the road, but I hardly know how to speak so. The 1st mortgages were today offered in the Board brokers here for 85 with no bids above 84  $\frac{1}{2}$ . I think that some of our parties have been realizing on their bonds lately, for certain brokers (which I think have been working for them) have been selling a little under the market price all along, lately, I don't know what else can break the market down so. There seems to be some movement towards working them up, but I can't tell whether they are all strategetic or in real good faith. If I can find out anything I will let you know. I can't see why they should not be good though, being a 1st mortgage on the road, and hence o.K. if the road should fall into the 1st bond-holder's hands. If Government should take the road they would have to assume these bonds. As for land grants, I feel different for I don't consider them very good.

I don't by any means think though that the present managers are going to give up yet. They are working towards settlement with the contractors; settled on basis with Brigham Young today. They owe him a balance of \$735,000 in addition. He has brought in extra bills to the sum of over \$400,000 on which Trustees have allowed over \$200,000 and agreed to leave the other \$400,000 to referees.

Brigham will have the best of them there I think. His referee will be better posted than ours. Bent has brought in extra Bill of about \$40,000 McGee \$50,000, Green and Hill 40 or \$45,000, Davis and Co. are here too, and the Trustees are to send a man out to take an account of all the stuff in the woods and elsewhere that they have on hand, evidently with the idea of paying them for it. Durant seems to be trying to break our folks down, and I think he has caused these folks to bring in their extras. McComb backs him (Durant) up and also, I believe, Bardwell, and some other parties. Oakes Ames' courage is good yet though. I wish he were President of the road.

Oliver Ames starts west in a few days to meet the commissioners of Five Eminent citizens. I suppose that if you can you will take the trip with him. Col. Hammond seems now to have full swing of all operating matters, express, &c. He is in favor of lower freight rates but is not allowed to cut under any more. 1st class is now \$7.43 through. As for the estimates that you sent for I will cause you to have copies of everything you ask that is in my possession.

But it is my opinion that no one here will ever get the true figures of the cost of the road. No two reports from the New York books ever agree. I will try to get for you in a day or two these documents. I forgot to mention that one of the allowed claims in Brigham Young's extras was \$54,000 for delay waiting for the location of the line.

For the last few days things have been considerably mixed. A great deal of business on hand. Did you know that Hazard had got judgment in his suit against Durant for over \$300,000? He was assisted in this by using the company for his own benefit, getting them in somehow as parties to the suit. Durant told the company that if they had anything to do with it he would hurt them all he could, and he seems to be carrying out his threat. He is very hot about it. I will write again in a few days. I hope to hear from you that you are well again."

On August 31st, <sup>1869</sup> I received the following letter from Mr. James F. Wilson, one of the Government Directors, from ~~Fairfield~~, Iowa:

"I send you a letter from Seever; what do you think of it? I don't see how I can now raise the funds that may be required, but have written to S. for more complete information, and advised him that I have forwarded his letter to you. Please return his letter and say what you think of the project.

The financial statement procured by Williams not yet received. If it dont come I will give him a reminder that will bring something.

Saw Harris, he is all right and sees things about as we do. Said he was glad I had demanded the statement and will insist on one himself. Will be at the next meeting, and stand with us in demanding a full exposition of the affairs of the company."

On September 2nd, Mr. L. S. Bent wrote me from New York as follows:

"Doctor returned from Boston last night; also Reed, Davis, Frost, &c. Think the Boston parties will have to come to time for T. C.

I think his combination against them is too strong. They made a settlement with the Mormons (Young & Co) they are to take iron and equipment to the amount of \$600,000. Reed goes to Echo tomorrow.

The Doctor says when they convert everything they have into money, they will be six millions short of paying the debts. He gives them till the eighth of the month to come to time or bust.

Bonds are 85 3-4. They voted Frost \$700 a year extra for contractors. He would not accept it. Voted to send out special agents to take account of Davis & Assn. material as a basis of settlement.

Shall remain here until my first paper becomes due, which is on the sixth inst. Will write as often as there is anything interesting."

These letters only go to show the great difficulty of settling up the muddled administration of everything west of the Missouri River and the Construction Department when Durant had hold of it.

<sup>1869</sup> On September 3rd, Mr. F. S. Hodges wrote me from Boston as follows:

"I have not been enabled to get the estimates &c. off yet but hope to tomorrow. Mr. Ames starts Monday for the West.

I suppose now that the Mormons are about settled with, that we will have no trouble in travelling over the road, though something is said about Davis and Associates men going for him.

I have nothing to add to mine of yesterday, except that there has been something said or written by Duff or Ames to Hammond about the engineer department, judging from a late letter of Hammond to Ames.

From its tenor it is evident that Hammond desires to have the engineer Dept. merged into his, in which he is seconded by certain parties, while Duff desires to have town lots, &c. turned over to Davis Land Agent. Hammond is to talk to Ames about this next week.

Crocker wants them to take such rates as will make the steamers haul off. Says they carry per month N. Y. to San Francisco, 5000 or 6000 tons of merchandise, and as nearly as much back to N. Y. and 100 or 1500 passengers."

Mr. Ames knew that I was anxious to be relieved as Chief Engineer of the Union Pacific as soon as they could spare me, or as soon as the work I had in charge was completed. I felt that Morris could do this work without any advice from me, but the company could not agree upon the distribution they should make of the different departments I had control of.

On September 9th, Mr. Ames forwarded me the following letter from Mr. C. B. Comstock, one of the Commissioners for re-examination of the road:

"Will you please furnish the Pacific R. R. Commission with complete maps and profiles showing the location of the U.P.R.R. as constructed; a list of all bridges, their heights, lengths and character in detail including masonry for same; a similar list of all other structures for crossing openings and ravines; a list and description of all buildings on the line of the road (with location of the same) including engine-houses, station houses, machine shops, section and tool houses, tanks, car houses, &c., &c. a list of all sidings and their location and lengths. a list of all rolling stock, specifying its actual condition as regards fitness for immediate use; a list of all machinery and tools on the line; a list of all snow-sheds or fences, with their lengths, location and character; an account in detail of all surplus material, such as rails, ties, &c. and a statement of the number of cars whether baggage, freight or passenger hauled over the road in the months of July and August and carrying freight or passengers not on account of the company, specifying the numbers on each division and whether the cars were loaded or not, and stating the direction in which the cars were moving.

A description of all lands and buildings at stations is also requested. Will you have the papers verified by the proper officer of the Company and sent to Promontory by September 13th, proximo?"

This shows the amount of work that had to be done in my office; furnishing this information for every commission that was appointed. We had to duplicate it time and time again.

During September I was out on the road with the commission of eminent citizens helping them in their examination.

<sup>1869</sup>  
On September 16th, I wrote Mr. J. E. House the following letter from Echo :

"I sent you several telegrams to furnish data for the Commissioners.

I find on examination that 1st the profile of Promontory is wrong. 2nd, that the map shows only the 80 foot line, 3rd, that the alignment of profile is not carried out at west end.

4th. That the table card of distances used on road is wrong in its division between stations. And that list of bridges west of Rawlins cannot be relied upon, you therefore want to put in our list to that point making such changes as you know has been made since that list was gotten up. The list Rollins sent in from Rawlins to Promontory is very nearly correct.

The depot ground data wants to show the name of depot or station and the amount ground in acres, its length and breadth, &c. You will have to make out this table carefully, and see that no mistake is made.

On my maps no station or depots are marked at West End. I have a good deal of trouble in gaining the information asked. I ordered the bridges alignment and stations put on our profile long ago and supposed it was done. On the maps of 10th and 11th hundred miles I had put in in blue ink the changes in Weber, but over Promontory I never put them in. Morris' map of that line was sent in and from it the 80 ft. line is changed; wants to be put on our present map so as to show original and change, putting change on in blue and the tracing I want is as line is now run.

We are getting along slowly 100 miles or less a day, but I expect to get in in a week.

I want Cleburn to meet me at Cheyenne so as to go over three culverts with me as he is thoroughly posted. I will telegraph you about time I expect to be in Cheyenne, so he can meet me there. You will have to work hard on maps and table so as to have them ready on arrival of commissioners.

I want to be prompt in my data, as the C. P. has entirely failed to furnish theirs.

The list of buildings on road I can correct as I return, but if you have data there you can go on and make up first copy."

On September 25th, we completed the examination of the road and I returned to Council Bluffs with the commissioners. I was satisfied they would give us full credit for all the expenditures that we had made since the Blickensderfer commission reported and I was in hopes to get the amount we would have to furnish to fully complete under two millions.

<sup>1869</sup>  
On September 26th, I received the following letter from Mr. Ames who was enroute West, dated Chicago:

"The case of Brigham Young and ourselves, referred to Wilson and Smith was to be commenced within thirty days. The important evidence in the case is Reeds. Dr. Durant when in presence of our Trustees was decided in his testimony that he gave no authority for the extra charges claimed that they were not allowed by us.

If it should be deemed important to have Durant before referees, we should notify him. I am so doubtful about him that I fear he may give, for the purpose of injuring us, testimony entirely different from that at Boston. We were till 8 o'clock P. M. getting to Chicago. Detained by running off the track. I see by papers the money market is very stringent and we

must make our expenditures just as small as will possibly answer."

<sup>1869</sup>  
On September 29th, Mr. Hodges wrote me as follows from Boston showing the money conditions in the East:

"Mr. Ames returned this morning. In as much as you are again at the Bluffs, I suppose you are desirous of hearing about finances.

There has been such a panic since last Friday that nothing seems to have any value, neither gold, stock nor merchandise. About two weeks ago U. P. 1st mortgages sold up to 87 and 88. Since then they have dropped. Some \$15000 were disposed of today at Broker's board for 82 and 82 1-2. The company are spending \$10000 now in advertising them, and I am inclined to think that they will make another rise before long. It seems to me that there are too many yet unsold by the Co. to allow prices to drop far without some effort to hold them up at least to allotment figures.

I suppose that you have received the circulars issued lately, in regard to certificates for 1st mortgage at Washington with land grants and stock. The other about income bonds and stock and redemption of the certificates 1st Mtg. bonds of July 3, 1868 issues.

I think that these securities will be mostly taken up by the stock-holders. Though my impression is that even with these schemes there will remain a deficit of a couple of millions to float.

I don't see the items of repairs of roadway and bridges, snow-fences, Missouri River Bridge, Division shops and buildings, &c. &c. figuring in their calculations at all.

The first mortgage interest has got to be raised in three months. According to my calculations the Operating Department don't have a very heavy balance of cash on hand at the end of the month. I am making several calculations in regard to earnings and expenses, yearly interests, &c.&c. which I shall have prepared to show you at next quarterly meeting and which if I am right in them will, I think, show you different results than is expected from those who have not thus figured up these accounts. The gross earnings this month are footed up larger than any month before, except last May. I expect September earnings will be in the neighborhood of \$750,000. Last May was \$979,000. June, \$706,000., July 623,000, August 617,000.

This makes our folks more hopeful here, and more inclined to help out. Oakes Ames don't flinch any, though it has mostly fallen on him the past summer. Durant seems to have hauled off the course. He bothered all he could for awhile, but it don't seem to work here. He and McComb were the originators of this income bond scheme, as a consequence many of the U. P. men were afraid of them, but they have been issued, so they can't apprehend trouble from them. They suppose it an attempt to obtain control of the road.

Things remain here about as ever. Contractors and others are being rapidly paid off. The only and main thing here is raising the wind. I don't apprehend any embarrassment in the concern, though their credit is very low.

I am in hopes that you recovered in health and that you will be present at next quarterly meeting 18th Nov. '69. By that time the five eminents ought to have their report ready, and financial matters look well towards a solution."

<sup>1869</sup>  
On October 1st, I answered Mr. C. B. Comstock's letter from Council Bluffs, as follows:

"I have the honor to submit the following data, maps, profiles &c. pertaining to my department of the Union Pacific Railroad, called for by the commissioners:

1st. Map of eleven hundred miles. showing eighty feet grade line and temporary grade line over Promontory Mountains.

2nd. Map of the location line for three miles west of Omaha with sixty-six feet grade, and also the bridge line with thirty-five feet grade-- latter in red ink.

- 3rd. Profiles of Promontory lines-eighty feet grade. Profile of sixty-six feet grade and thirty-five feet grade west of Omaha.  
4th. List of all bridges and other structures and character together with all permanent sidings, their length and locality.  
5th. Recapitulation of same.  
6th. List of snow sheds and fences.  
7th. List of quantity of land used for depot purposes at each station with location, Etc.

The line, as now located and constructed has been accepted by the Government--the commissioners stating in their report the allotment necessary on each section of twenty miles to be retained to bring the line over Promontory to the eighty feet grade line, and at Uintah, to make the short change there now being completed.

I am unable to state, accurately, the number of cottonwood ties placed in the track, but it is between seven hundred and fifty thousand and nine hundred thousand. A large number of these were replaced in 1868 over one hundred thousand in 1869, and from the data furnished by the General Superintendent you will see that there is more than enough on hand to replace whatever remains, as fast as their condition requires it.

I enclose plans, size and strain of the Devil's Gate combination bridge and the Wood River Iron Bridge.

I submit also a statement of the quantities asked for to fill each of the trestles over ravines and high banks, commencing at Promontory and going East, the quantities are as follows:

Promontory.

Trestle No. 1	- - - - -	- - - - -	- - - - -	7508	cubic yards.
Trestle No. 2	- - - - -	- - - - -	- - - - -	83,219	" "
Trestle No. 3	- - - - -	- - - - -	- - - - -	3,620	" "
Trestle No. 4	- - - - -	- - - - -	- - - - -	9,414	" "

Echo Grade.

Trestle No. 1	- - - - -	- - - - -	- - - - -	22,374	" "
Trestle No. 2	- - - - -	- - - - -	- - - - -	23,925	" "
Trestle No. 3	- - - - -	- - - - -	- - - - -	7,958	" "
Trestle No. 4 (high trestle)	- - - - -	- - - - -	- - - - -	99,904	" "
Trestle No. 5	- - - - -	- - - - -	- - - - -	6,034	" "

(Over temporary or S. track around ).

Piedmont.

Trestle No. 1	- - - - -	- - - - -	- - - - -	42,000	" "
Trestle No. 2	- - - - -	- - - - -	- - - - -	51,000	" "

The maps and profiles of the entire line, as constructed and accepted by the Government commissioners are on file with the commissioners' reports in the office of the Secretary of the Interior.

On the map submitted (scale one mile to an inch) showing different lines over Promontory Mountains, the red line is the original eighty foot line and the blue line, the finally located and adopted eighty foot line. Of the lines on the scale of one hundred feet to the inch (on same map) the blue line is the adopted eighty feet grade line, as built upon, and the black line the temporary changes made in it to facilitate construction and overcome the lack of material to fill banks, &c. It is the intention of the company to take out these short changes this winter with cars and use the material in filling trestles.

Additional snow-fences and sheds are being rapidly built and will be in position on all points of the road subject to heavy falls of snow or drifts, before winter sets in.

A heavy force of men with gravel trains, steam shovels, scrapers, &c. are kept at work at all points of the road doing whatever is necessary to bring the road bed up fully in width, ballast, etc. The large surplus of material of all kinds on hand machinery, motive power and rolling stock together with the work being done along the entire line of road, of which the commissioners have personal knowledge is an indication of the future condition of the road in all its parts, as well as evidence of the intentions of the company for present and future, and it is all that we deem necessary to say in behalf of the road."

1869

On October 1st I received the following letter from Mr. J. Webster of Bitter Creek in relation to the work being done on the road:

"Enclosed I send you vouchers for work done in the month of September. The abutments for bridge 95 near Rock Springs is about one half done, will be finished about the 20th of the present month.

The new channel of Bitter Creek between bridges 66 and 67 is completed, channels filled up and track laid over them. The channel between 63 and 46 will be completed next week. The embankment at North Platte bridge will be completed next week. Then all of the teams that Dey has, about 30, will go to work widening cuts, perhaps I can get a few more. Mr. Dey will do the work for 25 cents per yard."

1869

On October 1st, Mr. C. G. Hammond informed me that he had already put in and had on hand to replace Cottonwood ties including those expected from Davis and Associates, 810,173 ties.

The cottonwood ties which had been put in up the Platte Valley were breaking and rendered the track weak. The ~~burntizing~~ of them seemed to have taken all the life out of them and while they did not decay, they broke where there was any strain on them and we had to commence replacing them.

On October 9th I wired Mr. Williams that the estimate for the month of September on construction was \$32,000. This showed about what we were spending each month to bring the road up to the specifications required after the contractors left it.

1869

On October 8th Mr. Morris wrote me from Wahsatch as follows:

"Since I last wrote you telling of the Utah Central having taken almost all the teams out of Salt Lake Valley, I have found a man who has a lot of teams and who will do that piece of grading around the Clay Bluffs. I have laid the grade line 12 feet above the water, and have taken almost the original location. The price agreed upon is 35 cents a yard for all of it. More than half the quantity will have to be moved by carts and wagons and the part which is scraper work is full of round stones. That work is fairly underway and I hope to complete it by the middle of December. I received orders from Mr. Ha mond to move switches, &c. from Taylor's Mills to Ogden Junction.

I have made arrangements to put in two side tracks at the Junction doing the grading with scraper teams.

The question of supply of water at Wahsatch is pressing. I fear the effect of the freezing weather. Have a scraper outfit here now and will make a dam about four feet high and try and make a reservoir and keep all we can on hand. I have contracted for the hauling of all company lumber from Cottonwood and Hardscrabble Canons at the following figures- Cottonwood Canon contract with D. B. Bybee, timber and lumber \$12 per M. Piles 15 cts. per lin. ft. cross ties 50 cents each.

Hardscrable contract with J. Williams, lumber and timber \$15 per M. There are no piles or cross ties.

I have put a man at the R. R. switch to measure the timber &c. H. hauled by these men and to see that it is piled properly.

I have arrangements with three additional gangs of masons to go to work as soon as I can give them foundation. These present gangs ~~also~~ doing much better work since I discharged Van Dyke and put a new man in his place. He worked the gang three weeks in September, and did nothing. Bridge 110 which is two spans of 150 feet, has all foundations timbered and planked, the pier done; and one abutment up to the bridge seat. I propose to leave it there put up the other abutment to the bridge seat, and if pressed at other

bridges leave it there and go to the others, completing them to the bridge seats, so that the bridges can be put up and the parapet walls finished at our leisure.

At Green River I have one foundation driven, and am at work at another. Will put men in to cut off piles and plank on Monday.

I am building up temporary trestle here so as to drive the pile and furnish means of getting stone and material to the piers.

I have received the other steam pile-driver from Mr. Kendal and it is at work on the Bear River Bridge (west). I find the piles for that bridge very poorly driven and am attempting to drive them on down, they are four feet too high now, and if I succeed in driving them on down it will be a great saving over putting in new piles.

The Ogden bridge I will drive next with that driver. I have the piles of one pier and one abutment ready to dig out and to cap at bridge 118. Bridge 116 is completed, and I have a gang of men digging out foundations at bridge 123, there will be no need of piles there. I can drive piles but seven feet at Green River on the West side, and am quite confident of getting rock for the other foundation. I telegraphed you to know whether I should put in new masonry at Bear River, (east) and received no reply; if you want that done, it is time I was at it. I still hope to get all bridges out of the way of danger by doing some work next spring.

The scraper teams have widened the banks and taken out cuts over about 30 miles, leaving a few places for the steam shovel and gravel trains to complete. They have not made any money and do not average to the team over \$5.50 per day, and have to keep some laborers to finish up in addition. Some of them have left and gone home, and others will (I think) follow. I talked to them like a father during the past week and have made a good and strong point on paying cash each month. If possible, do send money to pay them off.

The road is very much improved by their work and the track will be kept smooth with half the expense. These pullman sleeping-cars are ruining the track, it is almost impossible to keep it up under their weight. Weed's division is extended to Bryan and Filmore's extended to same point from the East, leaving Hungerford out.

Engine house has been ordered for Promontory, and the one here ordered to have new roof and lined. I send your bob-sled as ordered and your gravel is loaded and will probably go Monday."

The Utah Central which Morris speaks of was a branch being built to Salt Lake by the Mormons. The Union Pacific were unable to build this on account of not having the funds.

On October 10th I received the following letter from Mr. F. S. Hodges from Boston, as follows:

"Matters are working along. Paper is being paid as it matures but it requires considerable exertion. Bonds have sold this last week 82 1-2 up, and land grants 54 1-2 up. I see that Gen. Grant has called the 18th of November as a day of Thanksgiving. This is the day of quarterly meeting; will the meeting be postponed on account of this?

Income bonds are being issued now and perhaps \$500,000 has been received on account of them. A contract has been made with the Atlantic and Pacific Telegraph Company, taking one third of its stock and turning in, in payment, the telegraph lines, &c. Two additional wires to be put up and the road pay the Operators and repairs, another third of stock is to be turned over to the C. P. R. R. if they will enter into a like arrangement. The balance to be retained by the A. & P. Telegraph Company.

I think that some arrangement about the Missouri Bridge will be made within two or three weeks. The N. Western and Rock Island roads to assist by guaranteeing with the U.P.R.R. \$2,000,000 Bridge bonds. I hear that the express business is at last settled, the U.P. to have an independent concern of its own. Those that go over the road and return feel encouraged thereby, speaking of it in high terms, and think very well of Col. Hammond.

Enclosed is a slip from today's paper, if I thought there was any truth in it, I would inquire about it. The late storms here did a vast amount of damage, delayed railroad travel greatly and some of the roads do not run yet.

The gold panic is working off, but money is tight, stocks easier; suppose you will be here in about a month."

1869

On October 9th, I wrote Mr. Ames from Council Bluffs as follows:

"I have forwarded to Washington to the commissioners, all the data called for from my department. Mr. Wilson came here Monday to sit on the Brigham Young arbitration but "Sharp, Taylor, Smith & Co." declined holding, that the days had passed therefore judgment would be rendered against them. After three days' talk about it, they finally agreed to postpone the case until Wednesday next and in the mean time consult Brigham. In case they do not sit, I shall commence suit against them on their failure so as to get and hold jurisdiction of the case in our court here, and away from Utah.

Mr. Wilson thinks we make a great mistake in settling any of the extra charges, if we were going to fight any of them. The report is here, and so Davis writes, that Mr. Dillon is to settle his account.

From what Hoxie and Snyder say, I am satisfied if we could get at what they know, Davis and Associates would stand a very poor show. Also Frost as well as all those men claiming and suing on wood contracts. There is hardly a doubt but what we are from 70 to 113000 ties short on their D. & C. delivery but to prove it is the trouble.

The C. P. people have done nothing as yet, but are getting ready to take their case to Washington; are working up facts, getting affidavits of cost of work from our contractors, &c. and they intend to make a big ear-case of overcharge, and so far as I can learn, our contractors are generally swearing in their favor.

It seems to me we ought to get along with our present buildings at Omaha without building any more. Why cannot we use the new blacksmith shops for a temporary car shop with a shed attached until next year, instead of building again and wait until we get on our feet?

The Weber valley wagon road co. offer to settle for land grant bonds, part supplies at Echo and part freight. What shall I say to them, and how much shall I pay them? What shall I do about right of way through the farms and improvements of the Mormons in Weber and Salt Lake Valley? They are appealing to me daily, and we ought to settle to avoid future trouble. Most of them now own their farms, having entered them at the land office. I can settle in most cases by paying the actual damage. Please instruct on this point.

There is another view of this case; the C. P. in case of a fight might use it against us.

Our masonry, snow fences, taking out of cuts to avoid snow, is progressing rapidly. My estimate on masonry &c. not including snow fences, or any side work is \$32,000, which I shall draw for so as to pay promptly on the 15th."

On October 9th, I wrote Mr. Morris from Council Bluffs as follows:

"I will endeavor to meet your accounts within a few days of the time. I cannot draw until the 15th and I have to wait to hear from draft before I can get money. In your store purchases make as much as possible apply to the construction account so that you can lessen the amount coming from me. When you stop my gravel stone put the sleds that come to Omaha in those cars and have the bills returned to Omaha offices as usual. Is it possible to get any lower terms from the Weber valley Wagon road Company? They offered to settle with Road for \$32,000 which sticks with our people. How about the right of way down Weber and in Salt Lake Valley? About what will it cost us? Have Central Pacific done anything yet? Where are your folks? Have they returned? I have not heard from you since I returned here. I would turn as much of my grading force on the light cuts as possible so as to be sure to get them out before snow flies."

On October 13th, Mr. Oliver Ames wrote me from North Easton as follows

"I telegraphed you today about the proposed draft for masonry. Mr. Hammond will pay these masonry bills from the earnings of the road.

He has been paying up the back pay-rolls and has now got them in

such shape that he can take care of these masonry bills, and I left the letters I received from Little of the Salt Lake Road with Mr. Hammond, with the purpose of having Reed, when he came down, explain the whole matter. Reed says the Salt Lake Company offered once to settle the matter all up, by our paying them \$30,000 which he thought was too much; that he took advice of some lawyer who said that this road was built after our location, and they could not hold us for damage. Our road must have taken away the travel that would have paid toll, and thus ruined their road, as a toll road.

If we pay them \$30,000 it seems to me it would be a sale by them of a piece of property that would not have paid the expenses of keeping it in repair. I wish you would consult Mr. Hammond about this road and the Land Damage, and see what can be done about them.

I think the Land Damages should be settled as soon as possible and have this properly done. Our road went through before these settlers had any title to the land from Government, but we ought to be willing to pay the damage, but nothing for the land, all we should pay is what the improvements are really worth then on the land taken by railroad, if they would take into consideration the increase in the value of their land by the building of the railroad, it would more than offset all the damage done them.

Has there ever been any dividend paid by Council Bluffs Bank yet? I have never heard of one. Our fire was alarming, showing our danger, but fortunate we were in subduing it.

Comstock telegraphs that he has not gotten all the returns he desired and has adjourned the meeting for a week, what does he want?"

On October 14th, I wrote Mr. Hammond from Council Bluffs as follows:  
(Unable to read letter)

On October 15th, <sup>1869</sup> Mr. Comstock wrote me as follows:- from Washington:-

"Yours of October 7th and 8th with the packages of paper are received. On examining the map of "Location of 11 hundred miles" I see that there are several places outside of stations 3000 to 3200 (covered by profiles sent) when the road or temporary line deviates from the blue or 80 foot line.

The map is dated Nov. 1868 and the question suggests itself whether those deviations from the accepted line still exist, or rather did they exist Sept. 20, 1869? If you could furnish plans and profiles of all deviations from accepted line existing when the road was examined by the present commission, and the same for the accepted, or final line, no matter how slight those deviations were; and also a list specifying the position of all such deviations with any remarks necessary to their being fully understood, it would be all the information the Commission will need on that point.

Of course, I do not include temporary displacements of track after; it has once been correctly laid in gravel pits or in putting in bridges. All cases like that at Uintah, should be included in the list of plans and profiles to be furnished."

*Answer*  
On October 16th, Mr. Ames wrote me from Boston as follows in relation to the settlements he was endeavoring to make with Davis and Co:

"Your letter of the 9th is received. Sharp and Gaylor have just arrived here. I have not had any talk with them, but they handed in a letter claiming that we had not come to time and had forfeited our agreement, on which they claim payment of disputed amount.

I don't think the breach is such a one as to entitle them to any damages. I will consult our lawyer here, on their case tomorrow.

We have made no arrangements here for the settlement of Davis and Assts. claim, the whole matter remains as it did. They have not consented to appoint parties to go on and make an examination to ascertain the value and amount of ties and timber they claim we shall take. We have paid all these bills of Central Pacific Road. I don't see how any evidence they may take will cut down the bills paid. The trouble we have with them, and where the reduction is liable to be made, is the freight engineering and extra spent on fire-water, hauling, &c. I hope we shall be able to make out our bills. Can anything be done to rebut the evidence they are taking? The Weber Valley Wagon road we ought to settle, but the claim they make after offering to

settle for \$30,000 is too outrageous.

If we had not touched their road, we should have ruined it by taking off the travel. It never would have paid the expenses of keeping it up. Consult with Mr. Hammond on settling up the land claims of Mormon settlers. It ought to be done, and can I think better be done now than any time. What ever you and Col. Hammond may decide upon as best way, will be approved.

Let us know how the scraper works, and bridges are getting along and generally the progress of improvement on road.

I wrote you that Col. Hammond would pay masonry bills."

*1861*  
On October 23rd, Mr. Morris wrote me from Wahsatch as follows:

"The work goes on quite well, but we have too much laid out for this fall on bridges. We are now working at the foundations of Green River Bridge No. 118 over Black's Fork west of Granger.

Bridge No. 131 over Black's Fork west of Church Buttes.

Bridge No. 132 across Muddy, an' bridge across Bear River at Corinne. We are working at the masonry of bridges 110 (across Black's Fork, will be completed in few days, except steps on wings) 118 and 132. Have gang ready to put on bridge 131 as soon as foundation is ready, also gang ready fo Corinne Bridge. Corinne foundations will soon be ready for masons. The pile-driver will go to Ogden bridge during next week. I can secure Bear River Bridge East by driving two piles in each bent and putting on new caps and changing a few stringers. We will have to work some time into the winter, to finish the work mentioned above. You see there are four bridges across bad streams at which we have laid no stone. Two of these are in Salt Lake Valley and we can work at them late in the winter, but Green River and Bridge 131 ar in much more cold country. I spoke to Col. Hammond, in answer to his question about the work needed to make roads safe and to enable them to run it, telling him of the cuts in Weber and Echo canons, which must be protected from falling with "wash", and about the culverts on the heavy grades. He asked cost. I told him about \$5000. He told me to go on and do it, and that anything which needed doing to keep the road open and run able to do, not waiting for any orders from you, as you were withdrawing from these matters, and he would take charge.

He also wants from me estimates and report on the condition of the road, and its wants, &c. Shall I report fully to him, or refer him to you for details, &c? The latter will probably make a muss for me. Your letter about flour came. I can probably sell quite a quantity if the flour is liked at Green River, Bryan, Granger and Piedmont from \$4.50 to \$5.50 per sack, depending upon the quantity in the market and the price of flour in Salt Lake Valley they are now selling at Echo at \$3.90 but most flour shipped from the Valley costs at Wahsatch and points East, 5 dollars to \$5.50, freight included. I telegraphed you to stop flour at Granger and save back freight from Wahsatch, I will see what I can do to points east of Green River and write you fully. In regard to storing flour at principle points, I will let ou know the quantities now on hand at those points, and if the supply is not large the plan is a good one.

Carter, I see from freight bills, is shipping from Salt Lake Valley your flour will come cheaper than his at \$4.50 per sack at Center.

I will examine and write again. I made out most of the vouchers &c. for Col. Hammond and he sent me the money. Men will be paid by Monday night. I do not care to stay here longer than you keep the charge of the work, unless you wish me to complete certain portions, particularly, if I can get anything else to do. I am closing out all my matters here so as to leave about December, if possible and not run risk of being caught in snow for the winter."

On October 27th, I wrote to Mr. Ames from Council Bluffs, as follows:

"I am in receipt of your letters of Oct. 13th and 16th. The work West is progressing as rapidly as possible with our limited means. Most of the bridges will be out of the way, but I shall have to lay some dry masonry late in the fall to get up all bridges over dangerous streams, and also try to make our present bridge over Bear River do. Snowfence, widening banks and cuts on Div. west of Green River is well under way and will all be completed. East of that point, snow fence will be up but not much done in widen ng banks and cuts.

As yet I have done nothing about wagon road or right of way; we are too far apart. Davis and Co. ties and lumber I would count for our own security if for nothing else.

The C. P. people are at work quietly but efficiently, both here and at Washington, and I am greatly mistaken if they have not secured the R. R. committees for both houses. All we can do is to watch and fight when the time comes to stand by our estimates and demand our pay.

On all the work west not a day has been lost nor a moment, and the work is being well done and at fair, in fact, cheap rates. I have virtually turned it all over to the R. R. Department.

All bills, vouchers, &c. both for the work and the engineers go directly to Hammond. He appears anxious to get everything under his control, and I am willing. I now have only the closing up our other matters. Shall I turn over lot department to Davis when I get ready?

This Washington commission has called for enough to keep me very busy for a month. I expect to get through soon, get all my books, maps, &c. in shape and be able to close my affairs so far as any engineering on road is concerned by Dec. or Jan. I have on my hands the bridge parties, have kept them to work so far but will soon be done with them, shall I discharge them? I can give the bridge closer attention hereafter than heretofore.

I am overdrawn at Omaha National Bank \$15,000 on drafts as heretofore to pay up old debts, settle up matters outside of construction or repairs. Vouchers have been returned to Boston. Either instruct me to draw or send me a draft on Hammond for it so I can square up with the bank, they are pressing me. When this is settled, the expenses of engineering department will not amount to much.

When I close up, I will post up books, profiles, Maps data, &c. and take charge of it until its use will not be required, this will avoid expense of office, &c. Can store it in a room where it will be safe, and until the Govt. gets through with us I suppose I shall have to use it more or less.

Mr. House, as soon as we close up, will leave; the rest of the engineers have gone on repairs.

The books of the Construction Dept., maps, profiles, data, &c. ought to be sent on here and filed away with Baldwin; it is valuable to us and the lack of it has cost me a month's work in getting up the data called for, and they now ask for data that I cannot give without putting men in the field.

I am watching work west and will until I close up with company though all payments go to Hammond. I doubt if I shall be able to go to the meeting on Nov. 18. Hope you will hurry up Bridge and let us get to work; we ought not to lose this season of low water.

Write as to draft, and if I am doing right in closing up my dept. turning over to Hammond, &c."

On October 26th, I wrote to Mr. Morris from Council Bluffs as follows:

"Yours of Oct. 23rd is at hand. You will have to do the best you can with your bridges, so as to get them out of the way. Bear river bridge you let them strengthen for the winter and let it go at that.

You better make your report to Hammond as he requests. I don't care anything about its coming through me and no doubt he wants to check on that. If I go into anything where I can give you employment, or if I see anything which I think you can do better, will let you know. Just now I am doing nothing but may early in the spring. You better remain on the road until you close up your work for the winter; so as to protect yourself, and longer if you desire, but be very careful to have all matters straight when you leave.

I answered your telegram; your cipher is wrong. I do not suppose we can get freight much cheaper from Central Pacific; would like to ship several car loads of flour at their prices; we can lay down a second quality at \$3.50 to \$3.75 but best will stand about \$4.50.

I wrote Carter, he says he paid in Ogden \$3.55; we can beat that. Sell what you can as we are flooded with it."

On October 27th, from Council Bluffs, I wrote Mr. Sidney Dillon as follows:

"Yours of Oct. 20th at hand. I ordered the code of Iowa sent to you from Des Moines which contains all the law required.

Look carefully at Chap. 52, page 196 to 221 of code-under the latter you want to organize for a R. R. & Bridge Co. so as to avail yourself under law page 221 of that portion of U.P. Charter that allows us to bridge, &c. Unless we do this you will have to go to congress to legalize bridge. You also want an office here and an office of the company (that is designated in the organization) by putting me in, it will avoid any more of an expense than we now have. The Corporation law of Iowa you will perceive is very liberal, and by using the rights-code page 221, given to R. R's, you can reach over and take advantage of any organization outside of the state

If company will give me the right to transfer all freight and passengers, I will agree to do it by cars, without putting a passenger into a bus or a pound of freight into a wagon- make the transfer in 1-4th the time it is made now, and give the U.P. 1-10 the gross receipts for the privilege, and only charge what it would pay.

I don't understand what our company is doing, nor what benefit they expect to reap from the way work is being done or allowed to be done. Seems to me it is a simple problem to transfer cars of our road to the east bank of the river, rather than cars of your road to west bank.

If there is anything else you want to know about bridge, write me.

Write up papers and send to me here to file and publish, as required by law."

1869 received the following  
On October 26th, Mr. J. M. S. Williams ~~wrote me~~ from me:

"Yours of Oct. 15th at hand. I hand over to Mr. Hammond all accounts that pertain to construction and repairs; virtually giving him entire charge of them and having sent to him direct all bills. My entire corps is now reduced to the bridge party and the men working up data for commissioners, &c. which I hope will soon be over. I am overdrawn at the Omaha National Bank about \$15,000. Three vouchers have been forwarded to you and I must meet the over-draft. You can send me a draft on Hammond or authorize me to draw on you for it, as you deem best. The bank is hard up and says I must pay. I think a draft on Hammond will meet the case and the bank would carry it as he, (Hammond) has quite a deposit there."

On April 10th, 1869, the Congress of the United States appointed a Commission known as the Eminent Citizens Commission, consisting of Hiram Walridge, S. M. Felton, Gen. C. B. Comstock, E. F. Winslow and J. F. Boyd to re-examine the Union Pacific road to see how much money had been spent up to the date of their examination, and the amount necessary to bring the road up to the standard as recommended in the report of Blickensderfer and Warren. These gentlemen were all able men. Three of them noted railroad men, S. M. Felton, E. F. Winslow and J. F. Boyd. One of them, General C. B. Comstock, of the regular Army and Gen. E. F. Winslow of Iowa had been connected somewhat with railroads since the Civil War. Mr. Hiram Walridge was a distinguished citizen and well known throughout our country.

On October 30th, 1869, they made their report, which is shown in the 41st Congress, 2nd Session, United States Senate executive document #90. It is not necessary to give a full report here--just those portions which refer directly to their instructions. Their first question was, what is

meant by Congress in its various accounts relating to the Pacific railroad by the words "First-class railroad"?

In answer to this the commission states as follows:

"In the opinion of the commission the requirements of the law will be satisfied, and the designs of Congress carried out, if the roads be properly located, with judicious grades; have substantial road beds of good width; ballasting, which with proper care shall be able to keep the track in good condition throughout the year; permanent structures for crossing streams, good cross-ties, iron and joint fastenings; sufficient sidings, water-tanks, buildings, machinery and adequate rolling stock--the more important machine shops and engine houses being of masonry--the commission is glad to be able to say that in its opinion, while some expenditures will need to be made, these two roads are substantially such roads today. The expenditures needed for completion will be given in detail for each road."

They brought in for the estimate for supplying deficiencies on the Central Pacific Railroad at that time, which was nearly a year after the other commission had reported, over \$576,550.

Of the Union Pacific, they speak of its location as follows:

"The location of the accepted line is highly creditable to the engineers of the company. There are fewer errors than might reasonably have been expected, considering the length of the road and the difficulties encountered, and none which, in our opinion, the government should require corrected. There are deviations from this accepted line at Promontory Mountains, and at Uintah, which should be corrected; and at Omaha the bridge line should be built to avoid the present heavy grade. The adoption of this line removes the necessity of reducing the grades on the present location, as heretofore required. An estimate of the cost of these changes is made."

Their estimates for the Union Pacific for supplying deficiencies from Promontory Point to Ogden was \$206,000. For supplying deficiencies of the Union Pacific railroad Ogden to Omaha, \$1,586,100. This shows that the year's work that I had put on the road to bring it up to the standard which the company had adopted, had reduced the amount brought in by the Blickensderfer Commission from \$6,771,710 to \$1,586,100, total sum of \$5,185,610 expended. The fact is I had expended more than that in bringing the road up to what the company considered a first-class road.

They added to this estimate the following remarks:

"After examining the lists of rolling stock, material and supplies on hand submitted by the company, and making a liberal allowance for the immediate future wants of the road, we find they have a surplus amounting to about \$1,800,000 in value."

The commission stated that both the companies were doing a large amount of work on their respective roads and are day by day bringing them nearer the standard required by law.

This great line, the value of which to the country is inestimable, and in which every citizen should feel a pride, has been built in about half the time allowed by Congress and is now a good and reliable means of

communication between Omaha and Sacramento, well equipped and fully prepared to carry passengers and freight with safety and dispatch, comparing, in this respect, favorably with the majority of the first-class roads in the United States. This was such a favorable report to the company, and coming from the character of men that it did, it virtually stopped the criticisms that were in the country and in Congress as to how the roads had been built. The simple facts were that the pressure for speed from all over the country, from Congress and the Government, forced the company to leave a good deal of the permanent work such as piers for bridges, stations, shops etc., until Fall, after their track was laid. This work they performed as rapidly as possible and both companies spent a great deal more money in bringing the roads up to what they considered a first-class railroad and what the operations of the road required than any of the commissioners found were required to make any of the roads a first-class American railroad.

On November 2nd, <sup>1861</sup> I received the following letter from Mr. Thomas B. Morris from :

"I have your letter of October 26th.

Our masonry is going on well, quite as fast as we can expect. I will write Col. Hammond at once and send you copy of letter. I have organized gang of bridge carpenters who are selecting the bridges out and getting them ready to put up. We will begin raising No. 110 in about a week. I have arranged to have pile driver go to Bear River east and strengthen that bridge as soon as we can spare it from the foundations. Green River bridge is the most behind on account of trouble in putting in river foundations. We cannot pile them and are digging down for rock or solid gravel-some

4 or 6 feet below bottom of river in main channel. We have two foundations ready and are building on them there. Bridge 132 has one abutment up to bridge seat. Bridge 118 two foundations in and pier half done. Corinne bridge has foundations driven and most of the digging done. They are all moving along together and will be completed about the same time. They will all be up to bridge seats and the bridges can be put up and the work completed on them during the next year.

If Hammond wants me I will remain here until Spring, but I must go home in December. I propose going about the 5th or 8th, after estimate all the earth work will have been stopped, and returning the first of January in time for estimates, &c. of that month.

I have also carefully examined the grade at Devil's Gate and at Wahsatch; also the cuts, &c. through Echo Canon. I find a great deal needing to be done thereto protect against washes and allow the water to get away from the mountain sides. I can see but one way to do it now, viz: to drive piles and cap them, dig out and put in the masonry before timber decays. This will give the company time to secure safety for the road next spring.

I have disposed of 100 sacks of flour and will probably be able to get the rest off during the week coming. Think Creighton and Monroe will take a car-load. I do not think there can be any risk in shipping another car load to Granger. I have not yet obtained all the information in regard to quantity on hand but think a few car loads, say three, at different points, Rock Springs, Bryan, Piedmont and Wahsatch and perhaps Evanston. The only trouble is storage, and the R. R. Company have good, tight houses with nothing in them on this division, and I might make arrangements with Mead for those points on other divisions.

The R. R. Company is very much behind in their payments and we will not obtain returns until January or February and even that will depend on how much snow we have; but the pay is good as it comes from the men and I can arrange with Mead for the sure collection from the pay car; I think enough can be sold for cash to pay freight. Car to Creighton and Monroe will be cash.

Bates of the Central Pacific R. R. Company had a party of engineers at work on the Promontory; they have run a line around our road not crossing at all, but keeping into the points of the hills. I saw Huntington. He says they (the C. P. Company) had appointed their man as referee and hopes now the U. P. Company would produce their vouchers and let the matter be settled up.

<sup>1869</sup>  
On November 7th I received the following letter from Mr. W. E. Chandler from Washington:-

"Yours of the 2nd inst. is at hand.

The Secretary will give the U.P. their U.S. bonds to Ogden, but they mean to keep both parties where they can compel them to carry out the agreement to sell. They will therefore hold in the Treasury over \$1,600,000 of first mortgage bonds, which cover the disputed territory, so that they may be cancelled if the agreement is carried out, and will also give the U. S. Bonds over the disputed territory to neither party at present. They will also hold \$2,500,000 of the C. P. first mortgage bonds so as to be in condition to compel the Central to pay us for the road. They will require no additional security besides that stated to assure the supplying of the deficiencies reported by the "eminent citizens" except that they will issue only one-half the U.P. Land patents.

The above decision is just and equitable, and the decision to hold the C. P. Bonds will enrage them terribly. I think the roads now stand on even grounds so far as carrying out the agreement is concerned. The U. P. can get along without their pay as well as the C. P. can get along with the road and without their first mortgage bonds.

I have advised the U.P. to decline to carry out the agreement of sale until they can be satisfied that they have a right to make it, with reference to the holders of their \$29,000,000 of bonds. If the battle should be fought as you and I fought last spring, we would make the C. P. agree to Corinne as the junction.

In addition to the money you let me have, Mr. Ames sent me \$5,000 which just about makes my fee. How does the \$7,000 you let me have appear on the Company's books? Can you arrange it so that the \$7,000 will appear to be a payment to you for your expenses at Washington, and so that I can nominally repay the \$7,000 if charged to me holding as payment for legal services the \$5,000 Mr. Ames has charged to me as such? This will make the second all right. Please so arrange it if you can.

I know and like Belknap very much, but, of course, should have preferred yourself for Secretary. The Administration is getting on pretty well. There are the usual blunders which must happen, but it is true on the great issues."

The delivery of these bonds to us to Ogden relieved us greatly. The Central Pacific were still holding off on making the payment to the Union Pacific for the line to Ogden and I have no doubt if it had not been for the law of Congress fixing the point of the meeting of the tracks at Promontory Point, they would have built into Ogden. While the Central Pacific was holding off on the settlement, the Union Pacific was now getting anxious and it shows that my having the agreement between the Union and Central Pacific for the settlement of the point of meeting ratified by Congress was of great value to us.

<sup>1869</sup> wrote  
On November 8th I received the following letter, from Council Bluffs,

to General Sherman:

"I am in receipt of yours and am very glad to hear that the President feels so kindly towards me. When in New York I had a talk with Rawlins and he was to tell the President my views of U.P.R.R. I am an officer of it, but I do not see matters as others do. I know that General Grant looks to me to see that the road is complete and that I should not consent to anything where he might be misled. Will you say to him, in confidence, for me, not to be under any circumstances used as coming from me, that I think he should hold from both companies a portion of the bonds, either government or first mortgage until the road is completed. As required by them, I believe this to be best for the stockholders and the government. I have no doubt both companies interested will complete fully up to the requirements but if anything should happen and all the bonds be given out, then the President would be blamed; understand my idea is that the President should act so as to be all the time safe. I do not know what the commissioners will bring in, but think they will be liberal. I do not want the President to do anything that will cripple us, but I want him to be safe."

Now, General, this is in strict confidence; Rawlins understood it but I fear had no opportunity to talk to the President before he died and I know I can write you and it will go no farther. I dont want General Grant to tell his cabinet my views as it would be misunderstood."

On November 8th, 1869, I again wrote General Sherman as follows:

"I noticed what you said in our letter about severing my connection with the U.P.R.R. and while I would pay more heed to your advice in the matter than to most any other, I am constrained to believe that I ought to in justice to myself and to others to quietly retire. My work as an engineer is completed, and any work of that kind now to be done, I have no taste for. The road is becoming settled, a thousand miles away; a mere plaything for Wall street to be set up or down as a few may dictate and in such hands will make no effort to repay for what it has done or make good the stock of those who went in good faith. When I see you I can explain more fully my reasons, when I think you will agree with me. What I wish to say now is, a word for the army, &c. Next winter there will be a determined effort to must out of service everybody that can be spared on duty or off. It happens to be popular and plenty follow solely this movement for that reason. Such actions blasts the futures of many good men; breaks the *esprit de corps* in the army, and sets a precedent that will do much more real injury to the service than any one of all others. I dont care how much they relieve the army of incompetents in the regular way, but what inducement is there for any officer to learn proficiency in his profession if he is to be discharged at any moment and without any real cause or necessity? Action of this kind is very demoralizing. I have seen lately four men in Congress and impressed upon them that such action will some day bring its bad effect upon our army as sure as the sun brings daylight. It seems to me proper that the President, the Secretary of War and yourself, in your messages should take strong ground on this question; I look upon the scheme, if carried out, as fraught with great danger and trouble in the future."

Some time before this, I had written General Sherman in regard to my intention of severing my connection with the Union Pacific as soon as possible and he ~~wrote~~ thought wrote me a very strong letter urging me to remain with the property and its operating department, for which I had no desire and this letter gives my reasons. After receiving my letter, General Sherman wrote me a letter saying that I was probably right in my conclusion.

On November 8th I received a letter from Mr. J. E. House in which he tendered his resignation as Division Engineer of the Union Pacific railroad to take effect that date. He expressed his heartfelt thanks to me for the many kindnesses he had received at my hands during the long time he had been

with the Department. Mr. House commenced with me as an axe-man on the surveys of the M. & M. road in 1853. He had been retained by Mr. Dey and myself in the services of the different companies up to this time. He was a pains-taking, honest young man, devoted to his work, obeying implicitly his orders, whatever they might be and made no complaints or criticisms. All the time I was building the Union Pacific he was in charge of my headquarters at Omaha and also had supervision of the land and lot department, holding everyone up to their work. As my records show, he was daily endeavoring to carry out my orders, looking after everyone in my employ, keeping me posted on every matter I was interested in and never seeking any credit or glory for himself and I was very loth to part with him, but he had made up his mind to leave the railroad work for the present, having become thoroughly disgusted with the ups and downs he had to go through on Union Pacific matters.

<sup>1869</sup>  
On November 8th, Mr. Oliver Ames wrote me from Boston as follows:

On my return from Washington, on attendance on committee of Eminent citizens, I find your letter of October 26th. I would now answer it in detail if Mr. Duff was not going to start for Omaha tomorrow or next day, and will be with you this week. What money you need you will consult with him about. I suppose it will be paid from Omaha.

Our Committee made a very good report, and if it had been for Comstock, I think we should have had \$500,000 or less to do. He had no faith in the road or us and believes we are going to get what we can out of the road and throw it up. The rest of the committee have faith in the road and believe we are going to put it on a paying basis and make it one of the successful lines of the country and our interest will force us to make it a good road."

On November 7th, I wrote to Mr. Oliver Ames from Council Bluffs as follows:

"I wrote you some two weeks ago relative to my overdraft at Omaha National and the funds needing to pay off the balance of the engineering corps. I want \$15,000. I have turned over all engineerings accounts to Mr. Hammond. I have setted with Mr. House and he leaves tomorrow and I desire to close up my office as soon as possible. Such men as Mr. House, Mr. Morris, &c. are invaluable men to the Co; their knowledge of the road has already saved the company thousands but no doubt Mr. Hammond prefers his own men; at any rate he seems disposed that way. Says few will be needed on line of road; two or three engineers only. The work on construction is progressing; is fine as could be expected. We will have to lay up some stone dry to get out of way of high water and grout it in spring. Snow fences are being put up but these matters are entirely in the hands of the running department; also some sheds. Good many buildings are being built; I suppose they are necessary but I would rather see the money that is going into them saved for next January's interest. At Wahsatch they have put a corps of engineers to work, running a line from summit of Promontory to Ogden keeping on north side of our line all the way down, thus avoiding any conflict in crossing. What shall I do with town lot account? Shall I turn it over to Davis and let him do the business? I can sign the deeds and let him take charge of it. You can send me draft on Hammond and I will give it to Omaha National Bank. He keeps his account there and I will use of it charge an overdraft to a deposit. By Dec. 1st I can close the Omaha office, pack up the books, papers, &c. and store them; such as I want on bridge I can use here and if I want to refer to them, I can put my hand on them.

No one can understand the maps, profiles, data &c. unless it is some one thoroughly posted on them.

Some one should go to Washington and get some of their law decisions straightened out. If I go east in January I will go up and get them reversed especially in Utah on our coal questions. If I do not, some one must go and if we delay any longer it will give us trouble".

<sup>1869</sup>  
On November 9th, I received the following letter from the Hon. C. G. Hammond from Omaha:

"By the enclosed pamphlet, published report of the commissioners of Eminent citizens, you will find the deficiencies which they charge against us. You will therefore please immediately to make a report of the work done under the different items as therein set forth, fully stating the amount of work done on your division in such tabular form as will intelligently show all that has been accomplished since the 5th of September that ought to be credited to us by the Secretary of the Interior on the alleged deficiencies.

I have a letter from Mr. Ames which prescribes duties which are only consistent with the idea that the operating department has an engineering department connected with it. I have without much reflection sent to Morris, Webster and Cleburne letters of which I send a copy. I may have done what you may not approve in this, but I hope not as I was anxious to get before these gentleman whom I understand to be the working force now on the line with as little delay as possible the report of commissioners that I may get such information as I am directed to act upon."

<sup>1869</sup>  
On November 11th I received the following letter from Mr. L. S. Bent from Quincy, Mass:

"Draft given me by Kennedy, Cashier, and accepted by J. M. S. Williams Treasurer for \$111,765.49 with 7 cents interest due Nov. 9th was protested in Boston for non payment. The above was given for the Promontory work on estimate made up by Reed.

I would like you to send me the cost of work on Promontory as estimated by Reed. I wish to show that work done by myself or under my contract was for less money than work done by company force or by other parties in the same localities. I think if I will stand a Black-mail from some few parties, I can get my money but this I do not propose to stand, until the thing is ventilated."

<sup>1869</sup> received  
On Nov. 20th, I had a letter from General Sherman in answer to mine of the 8th in which he told me of an interview he had had with President Grant in relation to matters on the Union Pacific and of my leaving it. What he wrote me in regard to what Grant said of my services was very complimentary. Grant regretted very much that I was going to leave the property and he was anxious to know what in what condition I was going to leave the road and what I thought it required.

On Nov. 22nd, I received the following from Mr. J. F. Wilson in relation to matters in Boston:

"I have just returned to Washington from Boston and fear that I will have to stay for a week or more. Have a case before the Attorney General and God only knows how long he will keep me waiting.

Things look better in Boston. I offered a resolution directing Hammond to pay no attention to the Wyoming coal contract declaring it opposed to public policy &c. Duff was not present. I suppose he will swear. He has gone West to fix on point of junction &c. U.P. and C. P. have agreed on \$3,000,000 for road to Promontory from Junction. C. P. pays in Government bonds and their own first mortgage bonds. The reported earnings for Sept.

and October are made up almost exclusively of earnings proper; scarcely anything returned on construction account.

Hoxie and Snyder will be paid; orders to that effect go out to Hammon today. I think that I have got Hoxie fixed for the clerkship under Dillon, who, it seems certain will be appointed, but say nothing about this to any one - not even Hoxie, until all is over, for there may be a slip. I will explain when I see you.

You must look after the meeting of the Missouri Valley Company in December, as it will be impossible for me to get to Sioux City at that time as things look now.

All the Boston people told me that you would not be disturbed. Duff is the only man in the Directory who is after you so far as I could learn. I have not seen Allison or Blair. The latter is west; the former here, but I have not yet seen him."

*1869*  
On December 7th, I received the following letter from Mr. Thomas B. Morris from Wahsatch:

"Your letter of Nov. 30th came duly to hand. I enclose in this a sketch of depot and yard at Junction. It is rough but will give you an idea of what has been done there. The main line about Ogden was high and most of the tracks have been raised up to that level; all of them have been raised some.

Our masonry goes on slowly but quite as fast as could be expected in such cold weather. It is only every other day we can work and only about six hours a day that we can use mortar; but these bridges must go up, and it is not policy yet to use timber. Bridge No. 132 is ready for superstructure. Three out of five pieces of masonry at Green river are done. Bridge No. 110 they are raising. Bridge 117 they are above high water with all the three supports. Bridge 131 has the foundation in and we begin on the pier this week. I do not think I will be able to put in the abutments but will use pile supports under the first main brace.

Mr. Duff gave a letter to Mr. Mead making him his agent with full powers. Mr. Mead put his stake 5 miles west of Ogden crossing. Gov. Stanford said he would not go there, and left for the West.

I am trying what I can do with the Mormon land owners, and have been working ever since you were here in a quiet way but no one seems willing to sell, and I did not want to push the matter too far or too fast. I think that now I can do a little better. They are boring two oil wells near Bear River City and I have taken up a couple of pieces of land and if they do "strike" I have no doubt but the land will sell well. I am opening a vein of coal there about one-fourth mile N. E. of track and putting on house.

If the coal matter is ever thrown open to bids, I can do well both from Echo and from here. Do you think I can sell my Coalville interest to Wyoming Coal Company? It is the best mine in that region and fairly opened. Am delivering coal at the mouth of mine at cost of \$1.25 per ton and putting it on cars at cost of \$2.75 at Echo station, that figure including hauling. Wyoming company are getting out but little coal at Evanston and water is troubling them. If they do not do better the rock mountain company will beat them for the supply west and on the western end of the R. R. To whom should I write to see if they will buy? I will take some little cash and balance in paid up stock of the Wyoming company. I can sell to Rocky Mountain Company but they have no money.

Brigham Young has graded the coal road to Coalville but has no means to lay the iron. If some arrangement could be made to do that it would pay, as the whole of Salt Lake Valley is to be supplied from those mines.

We have had much trouble with pier foundations in middle of Green River but think it is most over. By next week, I hope to report the foundation in."

On December 18th, Mr. W. E. Chandler wrote me from Washington as follows:

"Yours of the 15th inst. is at hand. I am sorry you have been sick, and trust your health will soon be fully restored. You will, however, have to be very careful of yourself all the rest of your days.

What I want you to do is to place upon the books of the corporation

when you settle your accounts, all moneys you handed me, I think about \$7,000 as an expenditure of your own in and about the business of the company. That sum will about cover the expenditures. Then the \$5,000 received from Mr. Ames will stand charged to me as a fee for professional services. It is about right. They have paid me nothing for all I have done since my return to Washington in August. They are penny-wise and pound-foolish in some things; foolishly extravagant at one time and injuriously penurious at another.

The present situation is as follows: the bonds from Promontory to five miles west of Ogden are to be issued to the C. P. but delivered to the U. R.; and also an equal amount of first mortgage bonds less \$1,000 delivered by the C. P. to the U. R. There will be no delay except that occasioned in order to get resolutions of the two boards of Directors. The balance of the Governments to the eastward will be delivered to the U. R. as soon as they cancel their first mortgage bonds so as to bring the issue to the legal amount allowed from Omaha to five miles beyond Ogden. Practically nothing but technical difficulties remain. I have not supposed the C. P. would break its agreement with reference to the five miles beyond Ogden; still I think the U. P. dealt with them carelessly and is liable to be slaughtered by them at any minute.

The Government will retain no security for the completion of the road, except onehalf the land patents. This you see is a very favorable result of the report of the "eminent citizens."

The two companies are neither quarrelling nor arranging in combination with reference to future questions. They are in a state of do-nothing ness. I do not anticipate serious attacks from them in Congress, but I think the Treasury Department will require them to pay up the interest due from them to the Government or else stop all transportation dues. Really there is no smart executive officer of the U. P. in this direction. Look at the verdict against the Credit Mobilier for taxes in Pennsylvania.

The new Secretary of War is making friends. The prospect is of a pleasant winter in Washington. I hope you will come on."

**669**  
On December 20th, Mr. F. S. Hedges wrote me from Boston as follows:

"I deeply regret to hear that you have been unwell again. It was hoped by your friends that the out-door life would entirely prevent any troubles of this kind.

In relation to payment of January coupons, I have to say that I think there is no doubt about it. They have received 1502 C. P. R. R. bonds towards the payment for the road from Promontory to Ogden, and expect this week to get the 1498 U. S. Bonds from Boutwell. They are also to get \$200,000 out of Col. Hammond (have received \$62,000 already). This will place matters in a way for negotiating for their gold. They are getting along pretty well now; I think they are well out of the woods.

The \$600,000 Credit Mobilier case has been appealed. Earnings are to be about \$600,000 for December.

Your account stands on the books here in Boston (credit G. M. Dodge, Chief Engineer) \$7,731.04. This amount does not include vouchers for October and November which have not come in yet and which when received will swell the credit larger. There is no reason why they should not pay you that \$15,000; but Mr. Ames' letter to Mr. Hammond to pay you has already been conditional and such conditions that Col. Hammond could not tell anything about it. I think he can manage to get it fixed this week. If I could only get Mr. Ames alone to speak about it, I think I could arrange it, but you know Ames is about half and half on all matters. It takes him a long time to decide and then anybody can run over him.

I will write you fully after the 1st of January. I suppose you have seen Mr. Wilson and that he has explained everything up to about the first of December, or I would have written.

I think the C. P. intend to hold to Ogden. Duff and Stanford were to select Junction within 60 days from 7th November-within 5 miles of Ogden.

I hope you have had your last report 1868-1869 put in hand of printers. If you don't, it will never be done."

In Dec. 1869, I made my report to the Union Pacific Railroad Company as chief engineer for the year 1868 and 1869. I included in this report the reports of Mr. Blickensderfer and the other division engineers; also a complete statement of everything that we had built on the Union Pacific, its grades, curvatures; it also included the report of Colonel Hudnutt on his survey to Portland, Oregon. This report was published by the Government in 1870 and is attached as an appendix to this Biography. It can also be found in my Pacific Railroad documents, Vol. . Page . I include it as a part of my statement of the work I did on the Union Pacific railroad.

On January 8th, 1870, I virtually turned over the repairs of the road to the running department in the following letter to Colonel Hammond:

Council Bluffs, Iowa.

"Mr. Webster's services were dispensed with and Mr. Cleburne was instructed to attend to any work required from my department, over the division Mr. Webster formerly had charge of. My instructions to the Division engineers were to respond promptly to any and all calls for work in their department from the offices of the running department. My intention is as fast as I can close my offices up to turn over the engineering on the completed road to the running department."

Col. Hammond and Mr. Meade, President and General Superintendent of the road, in their operations and in their communications with the different people along the road, seemed to take pains to reflect upon the work of those who had actually saved the road and listened to the tales of the disgruntled ones and of the thieves and grafters who had worked under the influence of Durant and Seymour. They seemed to ignore the advice of those who absolutely knew all about the road and they were especially critical of the work of Dillon and Price and the Committee which had had charge of the final completion of the road.

On Jan. 17, 1870, I wrote to Mr. Sidney Dillon the following private letter giving him the conditions on the road:

Council Bluffs, Iowa.

"I have been on the point of writing you for some time, just to say to you that on the road now, or under present influence, you appear to have very few friends. It seems to be the endeavor to pull down any one who prefers to work efficiently and honestly; so far as I observe, they take pleasure in building up the rascalities and corruptions of Durant, rather than say a word commendatory of those who brought the Company to a full knowledge of their condition. I believe I am about the last friend you have in the administration. Wilson, Price and myself, as well as Snyder and Hoxie, are not afraid to say what we think; all this is private but you should know it."

On January 25, 1870, I wrote Mr. Oliver Ames the following letter explaining my position and my desires:

Hammond

"I came over here today and saw Mr. House and explained to him my desires as to the future. That hereafter I did not wish to take charge of or be responsible for the engineering on the road, and as he wished to get in his estimates for the next year, I prefer that it should be done under his supervision, or by such person as the company may select. That I would close up all<sup>d</sup> my office matters &c. myself but if it meets yours approval, would relinquish all charge of the engineering on the line of the Railroad. I am responsible yet for a large amount of property, Government and railroad, which I am getting in shape as fast as possible.

I am still unable to do much but gaining slowly. If this meets with your approval, please say so. I have discharged in my department all engineers except Mr. Cleburne and Mr. Morris; who are on repairs. Mr. Eddy is looking after my matters and the lot department and will continue to do so until I can get fully settled up."

On January 26, 1870, I wrote in further explanation of matters the following letter to Col. Hammond:

"As I stated to you verbally, I have written Mr. Ames, President, that I desired to relieve myself from all charge of or responsibility for the engineering upon the completed road and that I had unofficially virtually turned it over to you, that you might take the necessary steps to get in your estimates for the coming year's work, and that I would settle up my business connected with this part of my duties myself as fast as practicable, and if this meets the company's approval, that they should so indicate.

I leave upon the road in the company's employ, Mr. Cleburn and Mr. McCartney, Asst. Engrs, the former has charge of repairs as far west as Green River; that latter is in charge of the work at a few points west of Green River; these assistant engineers have been virtually under the direction of your department since last fall and I shall leave them for you to dispose of as you deem best.

Mr. Eddy will remain in charge of my matters in the office until I get closed up. He is thoroughly posted in all the office matters, maps, records, books, &c. and will perform any duty as you desire and I will most cheerfully render any information in and relating to my department or the road of which I have knowledge and I request that any question arising in my department which needs any information or explanation that I be consulted in the matter. I have had charge of right of way, lots and lands (the latter now in hands of Mr. Davis) and the purchase of grounds, in addition to my duties as chief engineer."

There were all kinds of rumors afloat out west in relation to changes and account charges and reports of what the Directors were saying in Boston and some of these coming to my ear, on January 26th, I wrote Mr. Oliver Ames the following private letter:

"It has been intimated to me out here by some parties who have been in Boston that a charge is made against me of expending some money in repairs, unauthorized and that I raised the money out here to pay for them, etc. Now if any such charge has been made it is due to me that I should know it for I have not expended a cent on repairs or construction that I am aware of that was not ordered and I know I have raised no money to pay for any such work. I have raised large amounts of money on line sometimes for running department, sometimes for the current expenses of my Department but it was always when <sup>the</sup> Company was short of funds, and with the full approval of the Company. I hope if any such charge exists that I may be made aware of it. I know that Mr. Durant will do me all the harm he can and will influence others all he can as he has good reasons to hate me, and I care nothing for his ill-will or good-will but the rest of the Company I have the desire to retain the confidence of and want to meet any charge that pertains against me."

Under the new management, the transfers at the Missouri River had become very unsatisfactory and Mr. A. L. Hopkins, the General Superintendent of the St. Joe and Council Bluffs Railroad had written me making an urgent protest in the matter. I consulted Mr. Hammond and Mr. Mead in relation to the matter but got very little satisfaction from them and on April 26th, I answered Mr. Hopkins as follows:

Council Bluffs, Iowa.

"The objections you urge as to present method of freight transfer has heretofore been urged by me to our company--telling them that the cost, inconvenience, &c. would force connecting roads to seek relief by rival routes. If the superintendents of the other connecting roads would take the same position and you all should agree upon the freight transfer, I think there is no doubt that all cost to you would be relieved west of your terminus at the Missouri River.

I set forth my views to Mr. Hammond at same time passenger transfer was agreed upon, which will, as you know, be changed May 1st to the plan I advocated last fall.

I proposed for freight that U.P. should by agreement or under its charter transfer freight taking it from connecting roads at their terminus--on East bank of Missouri River--that all freight breaking bulk before going west should be changed at a common depot on the high ground near the passenger center or if they preferred, directly from the Iowa cars to Union Pacific cars--and the Iowa roads should be to the expense of switching on east side on their own grounds--that is they should deliver cars and receive them at the boat on east side of Missouri river and U.P.R.R. should take exclusive charge there and to all expense crossing and on west side--the cost of transfer to be the actual cost, it seems to me, one half. We do not want to lose your business and I hope you will in connection with the other roads present this matter to Mr. Hammond.

I will again press it and also present it to our board at the May meeting if the matter is not settled before. If the other roads could state their views, it would have great weight. They all are laboring under the same difficulty and I believe all desire to make the transfer as I suggest.

This method would also relieve all troubles and delay in high water, the changing of freight from one road to the other being made on the high ground on east side, which is above all high water and then taken to boat by the high water track and received by U. P. on their high water track.

Mr. Gray who is one of the owners of the lots was here today enroute to San Francisco. I took him on to the ground and he immediately said he would sign the deeds we now have, only one whom we have not heard from, but expect to in a day or two."

The company were having considerable difficulty with their land matters, which I had not yet fully turned over and on August 8th, I wrote Mr. Oliver Ames as follows in relation to them: <sup>(187)</sup>

Council Bluffs, Iowa.

"I have been out on the road for ten days and stopped at Cheyenne Laramie and other points where we are having trouble with our lands. I am also in receipt of letters from Commissioners Wilson and Secretary Cox. Their statements are all very well so far as they go, but the of Wyoming, under instructions of Commissioner Wilson is receiving filings of pre-emptions within 20 miles of our line on odd sections daily.

Then again, all our property at Cheyenne is on the depot grounds of Cheyenne which is on section 31 according to the U.S. Survey. Mr. Wilson instructs the Surveyor General to run his lines to the boundaries of his towns and admits the claim of the town trustees who are filing upon the town under the act of 1867, including section 31. The instructions of the Commissioner in number of cases have been overruled by the Secretary of Interior and U. S. Courts.

I only remember one case, that of the C.P.R.R. where the settler entered upon land within the R. R. limits and Sec. Browning made the decision could not even enter upon the even sections within the limit of the law, Sec. 7, noting it imperative to withdraw all the lands even on even sections. Since that decision, a law has been passed allowing pre-emptions upon even sections.

It seems to me if there is an office who can take these filings under the instruction of Genl. Wilson and secure title to the odd sections within our limits, then certainly there is an officer to whom they could address their order or proclamation. The Surveyor General acts in place of the Register and Receiver while those officers are duly installed and if I am not greatly mistaken it has been the custom for the Secretary of Interior and Commissioner of Land Office, in similar cases to issue circulars, orders and make it public from their own offices without addressing it to any one. If they decline to act, then it is our duty to immediately apply to the U. S. District Judge to inform the Surveyor General from his present action and not allow this matter to proceed further to our great trouble and detriment and as I believe indirect violation of our legal rights and at the same time to the detriment and misleading of the settler as we shall certainly control every filing or entry since the passage of the U.P.R.R. Act of 1862 and the filing of our original map. The Decision of the Secretary of the Interior will have to be the same on all heretofore made if every entry or claim made is not declared void, and the settler wronged and he now acts under what he considers his rights, looking no farther than the restrictions of the Co. of the General Land Office. If the matter is allowed to continue, the land grant to us will be of no avail as the best lands will all be taken or filed upon before the register or receiver's offices are opened. Now the most valuable lands and town sites even where located on odd sections have been taken and our right of sale or occupancy contested."

The way the lands were being handled was very unsatisfactory to me. I was anxious that all publications of the road issued by the operating department should include a short statement in relation to our lots and lands. The operating department wanted this done separately which was very costly and I protested that it was only duplicating our advertisements and called their attention to how other roads were handling this matter. Mr. Davis, whom I had appointed as Land Agent sided with Mr. Hammond in this matter; he wanted to issue independent advertisements to build up his department, etc. Mr. Davis had not had charge of the lot department and he was anxious to have this turned over to him, or some one else and taken out of my hands.

On August 16th, 1870, I wrote the following letter from Council Bluffs to Mr. Davis:

"In advertising your lands hereafter in book form, or in general advertisements, I want to have inserted an advertisement of the town lots or depot grounds. I understand from you last spring or summer when you were in but for some reason, unbeknown to me, they were left out--hereafter I want the advertisement included."

During 1868, I had been in communication with the St. Louis people in relation to continuing the Northern Missouri Ry. property from Chillicothe to Council Bluffs and finally took it up personally to complete it, being desirous to bring it to a connection with the Union Pacific so as to give St. Louis a direct communication with the West, and on November 8th, I wrote Mr. Sidney Dillon in relation to the matter as follows:

"I enclose a letter that covers my dispatch. Joy sees that the building of the Chillicothe road breaks up the C. B. St. Joe and K. C. line and he wants to stop us or at least make our road a local one. Perry is also behind it and McPherson who is in the Northern Missouri and St. Joe, Kansas Pacific are behind Joy, and as much of Joy's interests are towards the south line, he is desirous to keep from the north all business from south of St. Joseph. Now we must act promptly."

1st by every man who is in our U.P. that is in the Chillicothe entering his protest.

2nd. by all of them sending me their proxies so I can cast our full vote at meeting of the Association.

3rd by communicating immediately with Smith, Jamison & Cutting against it. Tell Smith, Jamison & Cutting that as soon as road is completed, the Union Pacific people will go ahead, consolidate the two roads and run it in our interest as the great south outlet.

4th, by showing to Smith & Cutting that the Northern Missouri P. R. from Moberly to St. Louis is being intersected, virtually throws away all their road from Moberly north to Ottumwa, Iowa.

5th. That it is a scheme to divert the Northern Missouri and the Union Pacific R.R. of the advantage they have whe the Chillicothe road is built if it covers 100 miles in distance and at least  $\frac{1}{2}$  the cost of transportation.

You don't want to lose any time in this matter."

On November 10th, I wrote the following letter to Mr. John Jackson, Chairman of the organization, who had in charge the Chillicothe railroad:

Council Bluffs, Iowa.

"The articles you call for in your order of Nov. 7th are all in store in Omaha, are the same you examined when here and are ready for shipment when you direct. I will order them selected, examined, put in good order ready for use.

Your letter enclosing the report of car and bridge examiners was promptly answered and I have written you two letters since, receiving no answer from either. The bridge examiner on the report forwarded to me made no objections to them. I am told that he said out upon the line that bridges were good enough but St. Louis wanted that work.

Allow me to suggest that I explain fully to the Association that the new material was bought by the contractors for building the U.P.R.R. and was a surplus on hand when that road was completed; it has not been used; was first quality and from the best and standard manufacturers at the time bought. We have on hand enough new bridges that were never used--chords, wrought and cast iron to each bridge complete to bridge two such roads as the St. L. C. B. & O. R. R. and I assert that they are in good order.

They have laid out in a dry climate until they are thoroughly seasoned; if a coat of white lead is put on them before moved, they will outwear any of the bridges you are now putting up on the road, as they are generally of green timber. Nearly all our bridges were

made in Chicago and if they report them unfit for use, all I have to say is he does not know his business or else he has some interest in keeping the Association from using them.

I am convinced you make a great mistake in the bridges. I know what they are and I would not let you take any article to put upon the road permanently if I knew it was not good, or what it is represented to be.

As to cars, I understand the cash value of material to be what it sells for for cash and not what any person may say it is worth. Since your car examiner was here, I have sold box and flat cars to four different railroads for cash, or its equivalent, that is for \$500 to \$525 for flat cars and \$675 for box. I have shown three master car builders who came here to select cars, the report of Mr. Bach, and not one of them coincided with him as to their value. Mr. Bach in his statement seems to try to find fault with the cars instead of stating practically what service they have seen and how much they were injured for use. He evidently knows that the cars he examined with steel springs, such as are priced to you new; that cars were much better heavier and stronger built than those commonly turned out and that cars made as ours were under a specification where all bolts &c. were increased 1/8 to 1/9 In. and strengthened purposely for hauling iron and ties over mountain grades, are worth in cash far more new than those priced to you from any manufacturer. The wheels and bearings show how much they are worn; some of them have not made a dozen trips over the road but have stood on a siding and therefore look rough upon the platform which is a great detriment to them.

Engines. The contractors have none; the U.P.R.R.Co. itself have 4 or 5 light engines, 26 to 30 tons from the best makers, too light to haul our long heavy trains; some are old, some new and some have been thoroughly refitted; they hold them at five to eight thousand dollars cash. I explained to Gen. Hammond when here about them more fully than I can write; they can be seen any time; some are at Omaha and some west.

The material that we listed as new I won't differ with you about and I think I shall be sustained in insisting that it is new and in good order. It may not have been bought this year but it is as new as nine tenths of the material of the kind you will buy to put on the road. Most of it is piled along the road from Echo to Omaha; a good deal of it in the original package, never even unpacked, of course piled up regardless of its size, kind or make and in no condition for favorable inspection but that would deduct nothing from its quality and value. I furnished Gen. Hammond a list of the property we had to dispose of at the time we submitted our proposition to him and the Association; that list stated clearly what was new and what was second hand and where it was purchased and if there is anything on the list that you wanted that was not found as stated, I would be pleased to know what it was. I understand the association had that list before them when they accepted our proposition and any practical railroad man will tell you that the best American railroads are using the same class of material, same quality, as most new roads at first buy material not up to the standard of our road. Most of the material held for sale is not the standard make on the market, but it often wears nearly as well; they thus save in cost but in the construction of our road; we bought the best we could get, and always of the standard make. Upon all the material sent you, I gave the lowest cash price that it is sold up to that time and you are at liberty to examine our sales book at any time you desire.

I have no doubt that I can agree with you upon the price, or settle any differences as to it that may arise and I think if you were here where you could see the different parties buying and using our supplies that you would be fully satisfied that it will more than carry out my statements in regard to it; some portions of it, as to quality and fitness for use, such as tanks, seasoned lumber, &c. you cannot get at any price as it is not in the market, in any quantity."

For the purpose of giving credit to the securities of the Chillicothe road, I took up the question of its being leased by the North Missouri, and on November 15th, wrote to Mr. Sidney Dillon as follows in relation to it:

1870  
Council Bluffs, Iowa.

"The question of the lease of the Chillicothe road to the Mo. is now up and we want to determine it. The St. Louis people are not posted evidently on these matters so well as the New York parties. You want to see the New York parties and get their advice. I have preferred as a fair basis, something similar to the leases of the Iowa roads to the N.W. and Illinois Central.

For instance, suppose the Northern Missouri lease our road and make it the main track from Council Bluffs to St. Louis; then everything that goes to or from us must go 182 miles over their road, while they obtain all the benefit from it and of course the country we develop and the through trade we create will give them an increased business. Say we take 45 per cent of the gross earnings until it amounts to Interest on 1st and 2nd Mortgage bonds and 6 per cent on stock; then 35 per cent amount guaranteed was - 1st year \$1500 per mile.

2nd year 2000 per mile.

3rd year 2500 per mile.

and the guarantee is low at that--that is, less than any of the Iowa roads are leased at but we run through a very sparsely settled country and the road would soon run its engines up to 8 or 10,000 per mile per year, which would soon bring the lease down to 35 per cent of gross earnings. Of course we should put in the several conditions of no disconnection and secure its operation as one through line from Council Bluffs to St. Louis, &c. I tell you if a live man had the Missouri Railroad and was cut loose from the hand of the Missouri Pacific and Kansas Pacific and was let loose to fight for business in any field open to him, he would virtually control the railroad interest of Missouri and make it a paying project. Now it is a milk and water management burdened by Uncles and Aunts with a surplus of employees in all directions and all afraid to fight for trade for fear they will tread on the toes of some director who has a bigger interest in the Missouri Pacific. The General freight agent refrains from doing anything with his or to turn freights or passengers to go over our road; said they must deal with the Kansas Pacific. The effect is we will form new combinations to go to St. Louis and get our share of the business or make the Missouri and Kansas Pacific carry for nothing, if the Northern Missouri can earn anything under its present arrangements it is far beyond me to see how and for the reasons stated when we give them a lease we want some security; then the road will be run as we run a road."

I gave my views in relation to this letter to Mr. J. R. Leonberger, of St. Louis, a member of the Chillicothe organization as follows:

Council Bluffs, Iowa, Nov. 14, 1870.

"Referring to your letter about lease, I am somewhat at loss how to put it in shape and knowing the wishes of the St. Louis parties as to the preference--in all the leases that I have been connected with, we have made a certain factor of the gross earnings which for a term of years is 45 per cent of gross earnings with other guarantees and prerequisites that makes it even a larger sum. This is a land-grant road and a through line to Chicago.

The Cedar Rapids and Mo. lease pays interest on all bonds and 6 per cent on stock. This is an East and West line but runs through a sparsely settled country. The last lease that I have known is the one to the Illinois Central of the Dubuque, Iowa, City, Iowa Falls and Sioux City R. R. which is 35 per cent of gross earnings and ten per cent draw-

back which makes it more than equal to 45 per cent. Suppose we make ours constitutional; the Northern Missouri reaps a great benefit from our road as all or nearly all the traffic over it must travel over 180 miles of that road. I would say 45 per cent of gross earnings until amount reaches sufficient sum to pay interest on 1st and 2nd mortgage bonds and 6 per cent in stock, then for balance of time 35 per cent of gross earnings.

Amount guaranteed	1st year	\$1500 per mile.
	2nd year	2000 per mile.
	3rd year	2500 per mile.

This would put the securities on the market and make them sell far better than any traffic agreement of per cent of earnings.

I should want the lease to set out fully that the road was to be used for a through trunk road from Council Bluffs to St. Louis with no discrimination direct or indirect to be made against it in any lease consolidation, bargain, agreement or running arrangement made by this lessee with any other road or party or with any branch of the Northern Missouri Railroad so that the lease should be remunerative as is not intended it should be. We could be discriminated against if the Northern Missouri should ever fall into hands hostile to the interests of the through line.

The daily earnings of the road to be subject to inspection of the stockholders, directors and officers of the road at all times; its expenditures, &c. and in any case of disagreement as to the proper carrying out of lease, proper management of road, &c., all difficulties to be left to arbitration by disinterested parties.

Until a definite lease or arrangement is now entered into and the old one annulled and the road is placed beyond all accidents of future changes, there will be a fear among the stockholders of some future calamity or change that shall discriminate against us or depreciate seriously the status of the project. Again in pushing our securities on the market all must feel secure in upholding and representing them to represent what we have intended them to be, the bonds of a 1st class trunk road that united two great interests with this feeling and the backing of both interests with a favorable line; there is no question as to the future."

1870

On November 12th, from Council Bluffs, I wrote Mr. Leonbarger as follows in relation to our people's views in relation to the leasing of the line:

"Our people who are in the St. L. C. B. & O. R. R. went in through the urgent solicitation of the Northern Missouri interests for the purpose of obtaining a straight, through, untrammelled route from Omaha to St. Louis, so they could operate in St. Louis and compete for their fair share of the Pacific trade. They understand that the building of the Chillicothe road made the Northern Missouri the master of the situation and that the opening of this country under proper management with so short and so strong a through route from Omaha to St. Louis must evidently turn a large share of Western Missouri and Iowa trade that now seeks a market in Chicago over lines that they are all individually hardly interested in away from there and into St. Louis but they give all this up for a good continuous connection for the Union Pacific to the south.

The fact that you are pushing directly through Central Iowa, that the connection with the U.P.R.R. through a rich country with your other arms reaching out to other points and lastly the fact that these lines are the shortest direct routes from the centers of travel and trade of the zones you occupy-has caused their men who have their matters westward in a manner to feel now every blow struck that takes a dollar of trade from them and with a foresight that is commendable they propose to sweep down all barriers by swallowing the entire railroad interest that antagonize their interest north of St. Louis.

Can you tell me where such a connection will bring a dollar to your road that you could not get without it and would cause any amount of undue criticism.

No amount of argument could convince the people that this was not the effect of the consolidation as shown today under the pooling of the three Chicago roads; that the arrangement with the south road is such that they will not conflict with St. Louis or south trade, and although we have line by way of Ottumwa, Keokuk and other connection, yet it is no benefit to us. The moment we start the east and west line, we fall into the hands of parties tied on south business, hand and foot. The U. P. finds that the Northern Missouri today by its of driving away all business that seeks the Union Pacific believing, I suppose, that it can force it over the Kansas Pacific and even now occasionally delivers our freight bound west to that road, I can see very well, under such a state of facts, why stockholders in the Northern Pacific should desire to get under a different management. Just now the Union Pacific is tied up by the peculiar conditions to one road for our business to the south and our trade amounts to nothing but this will not last long as we will soon be with you over on independent line where our folks will have to carry freight very cheap to keep us from getting our share. I believe I once said to you that one of the fatal mistakes in my opinion in the Northern Missouri was neutrality with rival lines--to have competition is the life of a railroad, and I would fight for any passenger or every pound of freight that leaves St. Louis for the West. No matter by whose connecting road it left me and if you consolidate, you will find that the northern Missouri will no longer play second to the Missouri Pacific and to me there seems no good reason why the people in the Northern Missouri Railroad could not make their company a paying railroad; the advantage it now possesses certainly entitles it to that, it seems to me. A great road as it is that in its position today there is none in the future for all of you to develop it rather than to merge it into a line not half its length, nor pay well with his interests by turning its traffic out of its natural channel, then why should not you make it do so by using its natural advantages in the direction of the natural and proper channels.

I had recommended to the company that the town lot department should be turned over to Mr. Davis who had charge of lands, but the way he was handling the lands, and since Mr. Hammond had come in, his views and methods had become such that on November 27th, <sup>1870</sup> I wrote Mr. John Duff, Chairman of the Land Committee the following letter declining to turn our lot department over to Davis:

Council Bluffs, Iowa.

"At the time I proposed to turn over the town lot department to such person as the company designated, I recommended Mr. O. F. Davis for that position. Matters have come to my knowledge connected with his administration of the land department that causes me to withdraw that recommendation.

I hope to have the full statement of the lot department as called for by Mr. Bartlett ready soon. It is a very long tedious job but will soon be completed. Although the company has selected Mr. Davis and have charge of this department, I think it will be for the best interests of the Company and the Trustees to select some one else and I suggest that Mr. Ames better withdraw his order to me to turn it over to Mr. Davis."

Serious questions had arisen in regard to the right of the company's ownership in land grants, town lots, etc. Many of the towns had been laid out on the even sections which belonged to the Government. We only had contracts out to give title when we got title, but I had been to Washington and had made arrangements with the Interior Department in regard to <sup>this matter</sup> which I thought covered all these questions and in a letter dated April 3, 1871, I set this forth to Mr. John A. Duff who was chairman of the land committee, as follows:

Council Bluffs, Iowa.

"It seems to me our land matters need looking after in Washington. I telegraphed Secretary of Interior yesterday on question of allowing Pre-emptions on our odd sections within limits; it is being done now notwithstanding the repeated decisions--mostly I think because the new land office have not gotten the instructions or decisions of late that overruled Wilson's decision, the orders with drawing our lands from the market. The following questions need looking up. Clause of the Denver Pacific R. R. and lands along their line in conflict with ours. Clause of B. M. & R. R. on lands conflicting with our ground. The question of the date the authority from Congress to change this line, &c. &c. all important in this case.

The claim of settlers in Utah valley, and especially those who have settled up our lands since road was built should be immediately brought up and brought through on the Hollister case.

The Rocky Mountain Coal Co. are loading the office down with papers to hold portions of our coal lands and have been extending surveys to help their claims.

The preemption in Nebraska are still on the docket and want to be pushed for a decision and is now before the Secretary of the Interior and a good case for us. The question of the right to stop surveys

right to enter lands under the law of Congress. The Fort Sanders Reservation should be cut down. Laramie City comes in on odd section and we could get benefit of it if the reservation is altered.

These are a few of the cases that need prompt attention and if we had an Attorney in Washington whom I could post on the matter, I have no doubt under the we would get any of the principles settled that will give much of these and hundreds of others that are arising daily.

I was informed in Washington that many of the papers we had before the Department were irregular and to as our affidavits, &c.

I mention these matters as I can see great trouble and probably loss to the company unless we settle all these matters as they come up. Decisions already made in our favor should be gotten out to the local U. S. Land offices; also the decisions of Browning, Sec. of the Interior, and the order withdrawing lands."

The friction between Col. \*Hammond and the operating department of the Union Pacific and the operating department of the Central Pacific during 1869 and 1870 was very detrimental to the interest of the property. The Central Pacific claims on account of their grades and curvature much larger differential than the pro rata per mile given them and the difficulty of meeting trains at Ogden, the Union Pacific of course being governed by the trains which meet it on the East and the Central Pacific being governed

by the wishes of the San Francisco people, made a continual friction. I suggested to the company that we extend our survey that had been made down the Columbia River and up the Truckee River to the California State line commencing at Winnemucca, crossing the Sierra Nevada Range by way of Beckwith Pass, which I knew was a much lower Pass through the Sierra Nevada Range than the line of the Central Pacific and ~~a~~ very much cheaper line. I also said I believed if we made known our determination to build this line that it would bring the Central Pacific to a more reasonable view of the operations of the line as a through line as intended by the law of Congress, and I received from the Company authority to make a reconnoissance and survey of such portions of the line as I thought necessary to determine its grades and its approximate cost. I assigned this duty to Mr. M. F. Hurd, who had been, during the building of the Union Pacific, on construction, but who had also been with me as an engineer during the Civil War and whom I knew to be a very competent man on reconnoissance and preliminary lines. I instructed him to make connection with the Bates survey down the Columbia near Winnemucca and from there running a line or reconnoissance to Beckwith Pass and through that Pass and down the Feather River to the Sacramento River. Mr. Hurd spent about sixty days on this work going over the country from Winnemucca to the Beckwith Pass. This was an open plain and he used a barometer and odometer and by running a preliminary line from the Beckwith Pass through to the Sacramento. He reported that his surveys showed that a feasible line down the Feather River could be obtained at a reasonable cost, a with a 90 foot grade and addded a 70 foot grade line, obtained by considerable additional cost. This settled the question as to the feasibility of this line to the Pacific and it avoided all the snow sheds and long 116 foot grades and heavy curvature of the Central Pacific. We made it known through the papers that the Union Pacific was proposing to build this line and it accomplished the work I thought it would. The Central Pacific showed a greater disposition to run their road in connection with us as one continuous line meeting our trains at Ogden promptly and establishing the line as a through transcontinental line from the Atlantic to the Pacific; therefore the Union Pacific never proceeded any further in building the Beckwith Pass line but in the last two or three years the Western Pacific has built a road through this pass on a 1% grade, but with very heavy work.

*Moto*

When the law of Congress was passed in 1866 giving the Central Pacific railroad the right to build East of the California State line until it met the Union Pacific going west, I knew that the original plan of the Union Pacific of building to San Francisco or to the Pacific Coast on the line we were building was ended, and I immediately gave my attention to reaching the Pacific coast at some other point, and made a close study of the country from Utah north-west to Montana and Oregon and Washington territories.

I had represented this matter to the Union Pacific people and as shown by letters heretofore published, I had been in communication with the authorities of those states.

After studying this country, making personal reconnoissances of the important points in it, on December 1, 1867, I made the following report to the Union Pacific Railroad Company on the branch railroad line from the Union Pacific Railroad to Idaho, Montana, Oregon and Puget sound as follows:

### The Oregon and Montana Branch

Office Chief Engr. U.P. R.R.  
Omaha, December 1, 1867.

Hon. Oliver Ames, Pres. U.P.R.R.,  
20 Nassau St., New York.

Dear Sir:- In accordance with the instructions of the Board of Directors forwarded to me at Salt Lake City, I have the honor of submitting the following report upon railroad lines from the Union Pacific railroad to Montana, Idaho, Portland, (Oregon) and Puget's sound, (Washington Territory) known as the Idaho and Oregon Branch. I shall report upon the line in two divisions, viz:

First, the approaches to Snake River valley, from the line of the Union Pacific Railroad, between Green River and Salt Lake City.

Second, the route from Snake River Valley to Portland, Oregon, and Puget's Sound, Washington Territory. I also include the branch to Montana.

#### APPROACHES TO SNAKE RIVER VALLEY.

First, the route marked "A" on the map leaves the U.P.R.R. line in the Black Forks of Green River, near the mouth of Ham's Fork of Black's Fork; follows up Ham's Fork to Hodge's Pass, through the rim of the Great Salt Lake basin; then descends to Bear river valley, which it follows to the northerly bend of Bear River, latitude  $42^{\circ} 30'$ , some eight miles north of Soda Springs; then leaves the valley in a N.  $45^{\circ}$  W. course, passing through the broad, open plain known as the Port Neuf Gap--this plain, from Bear river valley, being nearly level, without any difficult summits to overcome. It strikes Port Neuf river near where it canons through the range of mountains skirting the Bear river valley on the West, then follows the Port Neuf valley and enters Snake river plains about latitude  $42^{\circ} 45'$  and longitude  $112^{\circ} 30'$ . The only difficult work on this line is at Hodge's Pass, through the rim of the basin, where a tunnel of 1,600 feet will be required to obtain a 60 foot maximum grade, or a 90 foot grade will overcome the summit, avoiding the tunnel, but giving heavy work. I submit a profile of the line from the mouth of Ham's Fork to Port Neuf Gap. The balance of the distance to Snake river will be light work, and no grade to exceed 50 feet per mile, with good alignment. The distance by this approach from Ham's Fork to the mouth of Raft river, in Snake River Valley, a point common to all the lines, is 225 miles; from Missouri River to Raft River, 1,110 miles; and from Omaha to the navigable waters of the Columbia, at the mouth of the Umatilla, by this route is 1,515 miles; to Portland, 1,670 miles. The advantage of this route is that it is 80 miles shorter from Omaha than any other approach. It avoids entirely the heavy grades crossing the Wasatch mountains and to

reach the navigable waters of the Pacific we would have only 400 miles of road to build, with the U.P.R.R. completed so far west, in 1868, that the track could be immediately laid on this route.

Very little rock-work would be encountered on this approach. It runs the greater part of the way through valleys or over table-lands suitable for cultivation and capable of supporting a heavy population. Ham's and Bear river valleys are wide and rich, and skirt beautiful mountain streams, abounding with fish, and affording immense water power. Every acre of them could be cultivated. Vegetables and the smaller grains may be raised in abundance. The timber in the mountains adjacent to the valleys is heavy and in unlimited quantities, pine, spruce quaking asp, and hemlock predominating. Along Bear river, coal, of the brown formation, exists in heavy veins, and an analysis of it shows it to be some of the best coal existing west of the Missouri River. It is easy of access, has solid roof, and will be mined cheaply. The line would pass near the Mormon settlements at Bear River and Soda Springs. Snow in Bear River Valley lies steadily on the ground during the winter; but no enormous drifts would be encountered, as we avoid the heavy snows of the Wahsatch Mountains. A line by this route, with the proper financial backing, could be built at the rate of 300 miles or more in a year, depending entirely upon the U.P.R.R. to bring forward to it iron; for the superstructure. Ties, timber, lumber &c. abound and can be furnished along the line.

A line secondary to this, that would point more directly to the Montanan branch could leave this line at Soda Springs, avoiding Port Neuf Canon, bear due north until it reaches the southerly bend of Blackfoot river, following the valley of this river to Snake river plains; then due west, or, crossing Snake river, strike directly west towards Fort Boise. From Soda Springs to Snake river would be light work, light grade, and good alignment, and take us into well watered valleys, skirted by mountains of pine--as beautiful a country as I ever saw. A reconnaissance made of the Blackfoot valley shows that a very direct line could be obtained down it, the valley it follows being from 8 to 10 miles wide. The advantages of this line would consist in encountering less snow than upon the Port Neuf Gap line, and in the shortening of the branch to Montana, which would strike off near Fort Hall, on Snake River.

Both of the above routes could be shortened in distance by striking off from the main line where it crosses Bear river, on line marked "B", thus avoiding the tunnel and heavy work, crossing the rim of the basin at Hodge's Pass. The length of the branch would be the same as "A" line, but the total distance from the Missouri River to Portland would be increased 60 miles, it leaving the main line that much further west, and we should have to use the heavy grades on the main line, east of Bear river, that we encounter in overcoming the rim of the basin.

Second. The approach from Salt Lake City, or the mouth of Weber Canon, to Snake River, (line "C" on map) avoiding the crossing of the rim of the basin, would skirt the east shore of Great Salt Lake to Bear river, and follow the valley of Bear river to one of the streams leading to Marsh valley, and then to Snake river plains, or continue up the valley of the Bear River to Port Neuf gap. This line would be expensive, but of easy grade. It would accommodate all the settlements along the east shore of Great Salt Lake, Cache Valley and Bear river valley. Its general direction would be almost due north, part of the way east of north and it would increase the distance of the line from the Missouri river to Raft river, the common point in Bear river valley, 75 miles.

Third. The third approach, on the supposition that the road should be built north of "Great Salt Lake, would be from Salt Lake City, or Weber canon, along the east shore of Great Salt Lake crossing one arm of the lake, (Bear River bay) near Mud Island; thence along the west base of Promontory Point to Pilot Springs; thence down Clear creek, or Raft river valley, to Snake river. The crossing of Salt Lake would be in water from one to ten feet deep, and about 3 miles long. The line could be carried still further north, and cross Promontory Point some 18 or 20 miles north of its southern extremity, which would require some very heavy work and about 6 miles of 75 feet grades. After leaving the settlements of Salt Lake, and until it reaches Raft river, the line skirts a country uninviting and hardly susceptible of cultivation and avoids the desert. There would be plenty of water and timber along the route, with all the material necessary to build the road. Coal is said to exist in Raft River mountains, but this fact has not been fully established. The

rim of the basin, on Raft river range, could be crossed with 70 feet grades, and comparatively light work but heavy snows in winter would be encountered. The distance of the branch to the mouth of Raft river, by the line marked "D" on the map, would be 60 miles, and 1,165 miles from Omaha to the mouth of Raft river the branch marked "D" would be 150 miles from the mouth of Weber canon to Raft river, making the branch shorter than "A" line by 75 miles; but the entire length of the road to travel, from the Missouri river to the mouth of Raft river, would be 55 miles greater.

Should the main line of the U.P.R.R. run north of Great Salt Lake City, which is more than probable, the branch would leave the main line at the north point of Great Salt Lake, strike due north to Pilot Springs, then down Raft river valley to the mouth of Raft river, and would be only 60 miles long, and is the shortest branch that can be built, giving the same distance from the Missouri river as the last route. The work on this line would be light, but the grades heavy, the eastern rim of the basin being avoided by the branch, but crossed by the main line and the northern rim to overcome. Heavy snows would be encountered from Promontory Point to Snake river valley, which lie, in winter, three feet on the level, with the usual drifts of this high altitude. After the main line reaches Great Salt Lake, this line could be built as fast as line "A", but track-laying would not be commenced from the east until the main road was running to the mouth of Weber canon or the north point of the lake.

THE MAIN LINE FROM THE MOUTH OF RAFT RIVER TO PORTLAND  
(OREGON) AND PUGET'S SOUND.

The valley of Snake river is a wide plain, volcanic in formation, the river often canoning through immense gorges and over high, perpendicular falls. The plains are wide, reaching some 100 miles at the widest point. The mountains do not approach the river until the mouth of the Malade river or King's mountain is reached, on the east side, and Burnt river on the west, and a line could be laid all the way on either side of the river; but probably a better and cheaper line could be obtained by crossing the Snake to the north side, and then crossing back again. Steam-boats run up Snake river to Lewiston regularly, and 75 miles above occasionally, and from Old's Ferry to Salmon Falls, leaving a portage of 75 miles only by the valley line. The line would follow the valley of Snake river, or over Snake river plains, to Burnt River. This plain is so wide and the country so uniform, that nothing but an instrumental survey could determine the exact location of the line; but no great difficulty would have to be overcome on any of the numerous lines down Snake river that have been discussed by the citizens of Idaho and Oregon. From the mouth of Burnt River to the Columbia, crossing the Blue mountains, is the difficult portion of the route. The Blue mountains are high in altitude, rugged and the distance to overcome them is short, but the pass at the head of the Grande Ronde is said to be the lowest in the range. The route indicated now as most practicable is up the Burnt river, crossing to Powder, following its tributaries to a low pass leading into the waters of John Day's river, and following that valley to the Columbia, or crossing from Powder river valley to the Grand Ronde, and up it or its tributaries to the pass, and then down the tributaries of the Umatilla or Walla-Walla to the Columbia. Nothing but a thorough and careful instrumental examination of this country could determine the proper line. However, I am satisfied, from the profile and formation of the country, that a line can be obtained over this range of mountains with grades not to exceed 80 feet per mile and with work that will not be difficult or very expensive. After reaching the Columbia, that valley would be followed to Portland. On striking the Columbia at Umatilla, or at the mouth of the Umatilla or the Wa la-Walla, the navigable waters of the Pacific are virtually reached, and the road down the Columbia could be pushed just as fast as desired, as it could be used and worked upon at as many points as its early completion required. Charters for roads up this valley now exist, and short railroads around the Dalles and Cascades have already been built. The local business of Oregon and Idaho would support the road today. No such difficulties in obtaining material, labor or transportation would have to be encountered on this line as we have had to overcome in building the Union Pacific railroad.

From Portland or Fort Vancouver, to Puget's Sound, the work and grades are light and the alignment good, with no mountain ranges to overcome. A line would follow the general direction of Cowlitz valley, and make its terminus on Puget's Sound, at Olympia, or push farther north to Steilacoom. There is no difficulty which cannot be overcome on this portion of the route. The road could be built at any time, or at such time as the branch was building, as all material for constructing this part of the road (except iron for superstructure and equipment, which could be taken around by sea) is to be found in abundance along the coast.

#### LINE TO MONATANA.

The line to Montana would leave the Oregon line in Snake river valley or Soda Springs, following up Snake River valley, passing the main Rocky Mountain range at the head of one of the streams leading to the waters of Jefferson Fork of the Missouri. Two hundred miles would bring us right into the heart of this Territory, and the line, after crossing the main range of the Rocky Mountains, would take the direction that the interests of the territory demanded. It would develop the valley of the Jefferson and Madison, and accommodate all portions of the mining regions of that rich territory.

In work, grades, and alignment, the route is feasible, and could be run at all seasons of the year. Snow on this route never has obstructed travel, and the passes over the Rocky Mountains, in this latitude, do not reach an elevation of 6,500 feet above the level of the sea, while the general elevation of Snake river valley is from 4,500 to 6,000 feet above the sea, giving but little elevation to overcome, with good valleys, and plenty of distance to overcome it in.

The fact being determined beyond a doubt that there is not only a feasible but a remarkably favorable route from the U.P.R.R. to Idaho, Montana and Portland, the questions arise: What are its advantages over all others? what are the inducements to build it? and in what time can it be built?

1st. Its advantages. By commencing to build in the spring of 1869, the fall of 1870 would give Montana, Idaho, Oregon and Washington territories, a direct through railroad communication with all points east; whereas, by the route they have been looking to for railroad communication--the Northern Pacific--they will have to wait years, and until 1,700 miles are built, while we would only have 300 miles to build.

2nd. It strikes the Pacific ocean at Portland; also at Puget's Sound. This inland sea includes the whole body of water flowing into the Pacific at the Straits of San Juan de Fuca, and surpasses the Mediterranean in the safety of its navigation and the security and anchorage of its harbors. For all the China, Japan, and India trade, coming down the Pacific coast, it would save the water transportation for the entire length of coast line from the Straits of San Juan de Fuca to San Francisco, as all ships coming from China, India, &c. make our coast near the mouth of these straits.

3rd. We open up communication with all that vast country enclosed by the Rocky Mountains on the east and north, by the Cascades on the west, and by the rim of the Great Basin on the south, which abounds in fine streams, valleys, timber, and all the precious metals of the world. I am inclined to believe that eastern Oregon, as soon as this road is built, will exceed, in its products, western Oregon; and when you furnish the means and inducements that this road will give, and hold out to settlers the advantage of the country I have described, no one can now estimate the trade, traffic, and wealth which that now uninhabited, vast inland territory will develop. I am told that today the little valley of the Walla Walla produces for shipment by the Oregon Steam transportation Company's boats more produce and grain than they are able to transport. It gives Oregon and Washington territory an all rail communication with the Atlantic. It reaches the Pacific without having to overcome any grade to exceed 90 feet and avoids the Wahsatch and Sierra Nevada ranges, with their troublesome snows and inhospitable winters.

4th. It accommodates Montana, Idaho, Washington and Oregon with a railroad several years sooner than can be obtained by any other line from the east. In connection with the navigation of the Snake and Columbia Rivers as temporary aids or auxiliaries, it gives that people a communication with the U.P.R.R. by the building of only 285 miles of railroad, whereas, by coming from the east, they must build from 1,700 to 2,000 miles, through

an uninhabited, inhospitable, mountainous, broken country, portions of which are held today by hostile Indians, portions of it impassable in winter, in consequence of deep snows, and no portion of it having even the great advantage the U.P.R.R. had while building, of being near the great line of overland travel indicated by nature in the formation of the country, adopted by the instinct of the buffalo, followed closely by the savage, who now has been forced away from it by the advance of civilization. This branch has one great commercial and local advantage—it not only accommodates Montana, Idaho, Oregon and Washington, but the whole northwest coast is benefited, and no one portion at the expense of the other. It holds the trade, commerce and traffic of that country in its natural channel, and as it is built, mile by mile, every foot can be used in connection with the existing lines of water communication now established there.

Finally, with the proper financial support, I undertake to say that our company can build a road from our line to the navigable waters of the Columbia in eighteen months from the 1st of January, 1869; or, if necessary, we would commence building with the proper financial aid, from the Columbia east, and finish the work in two years from January 1, 1868.

It seems to me, with a route that nature has intended for a railroad to the Pacific, near our northern boundary, that the people of all that vast territory should abandon all other projects and concentrate all their energies upon obtaining an outlet east, through a country a great portion of the way susceptible of cultivation, and nearly all the way abounding in precious minerals, with an entire length to the Missouri river not to exceed 1,670 miles, with only all-rail branch to build of 785 miles, and only 285 miles using the navigation of the Columbia and Snake rivers, rather than to build the great distance and encounter the great obstacles they would have to overcome on a route due east. The time may come when the country will demand the building of the Northern Pacific; but today all it assumes to accomplish for the country west of the Rocky Mountains, all the advantages to be derived from building it, can be obtained in building the Idaho, Montana, Oregon and Washington branches to the Union Pacific

It is not a fiction, the great vision of Columbus; it is a fact, that we will soon have the means of directing a large portion of the trade of Asia across the continent of America. We will leave the Pacific Ocean at Puget's Sound or Portland and San Francisco, and reach the great inland channel of trade and travel across the continent the Union Pacific Railroad, and be only five days from the principal ports of the Atlantic. The great saving of time and insurance, with quick returns upon capital invested, will overcome the extra cost of freight, and, as a passenger route, no one doubts its general advantages it virtually annihilates time.

I herewith submit a map of the country showing the routes discussed in the report.

I am, very respectfully,

Your obedient servant,

G. M. Dodge,

Chief Engineer."

#### Distances.

##### Water and Railroad Branch.

Mouth of Ham's Fork to Salmon Falls, all rail,	285 miles.
Salmon Falls to Old's Ferry, by Snake river, steamboat - - - - -	150 miles.
Old's Ferry to mouth of Umatilla, railroad - - -	175 miles.
Mouth of Umatilla to Portland, via Columbia river, steamboat - - - - -	165 miles.
Total railroad - - - - -	460 miles.
Total steamboat - - - - -	315 miles

## All Railroad--Main line and Branches.

Line A.

Lines D.

In answer to this report, Mr. Oliver Ames wrote me from North Easton, Mass. on January 7th, 1868, as follows:

"Your favor of January 1st is received. I am satisfied that the road to Oregon will be a first rate operation when the time comes for doing it. But with the immense amount of other work we have the present year on hand, and the probability that all aid by Government will be refused to lines of Pacific Railroads until those now in progress have been completed, leads me to think that the Oregon road will get the go-by this year. If, however, it should prove that Government subsidy could be obtained for this line, and that we should be the parties to secure it, then our interest would dictate a support of a bill substantially what you desire, as showing the favor that our corporation would extend to the proposed road to Oregon."

Mr. Ames wrote me again on January 8, 1868 from North Easton as follows:

"From your report and the best evidence I am able to obtain, the branch road to Oregon is entirely feasible, and will be the cheapest route to the Pacific Ocean. Its great merit should command the hearty sympathy and support of all our country on the shores of the Pacific.

The Union Pacific railroad company will use their best efforts to secure the construction of this road whenever the people on its line shall awake to its importance. It cannot be built without Government aid, but our company should not appear as applicants for this charter, but it should come through the exertions of representatives of Oregon. Any aid we might give, without appearing as to prominent actors, will be most heartily rendered. I trust you will be able to

enlist active workers enough in this most desirable undertaking without entangling it with too many other interests."

I had introduced into Congress bills giving a land subsidy for this line but they did not receive favorable consideration and laid in the Committees; however, I kept pressing the matter and interested all the people I could in it, and On February 18th, Mr. William J. McAlpin, the distinguished engineer, in acknowledging receipt of my report, wrote me as follows:

"I have received your report on the branch of the U.P.R.R. to Montana, Oregon, &c. will you do me the favor to send a copy to Chas. Hutton Gregory, President of Inst. of C. Engineers, No. 25, Great George St., Westminster, London? In writing to him today, I have instanced your work and quoted from page 11, what I regard as a concentration of expression of American progress in few words than I ever met with. "The Creator formed the route; the instinct of the Buffalo sought it, followed by the savage and now replaced by the highest developement of civilization the Railway." I quote from recollection and many not have the words exactly right."

On April 5th, <sup>1868</sup> I received the following letter from a citizen of East Portland, Oregon, who had seen and read my report:

"Having read with great interest your report upon railroad lines branching from the U.P.R.R. to Oregon and Washington territory and terminating upon Puget sound, I beg permission to address you, and to inform you that until within one year past, I have resided at Steilacoom on Puget Sound since 1854, and that I have long been satisfied that the building of one hundred miles of railroad to connect the Columbia river with Puget sound would open a line of trade of vast benefit to Oregon, to Washington and Montana territories and prove a profitable investment to the builders.

We have waited patiently and in vain for that institution called the Northern Pacific Railroad company to build or even to begin their work but they do nothing but beg in the Halls of Congress and leave us no hope. I am determined, poor as I am, that they shall not act the dog in the manger and prevent others more enterprising from building. If they will not build, why do they stand in the way of others who will do the work and open a line of trade across the Continent? The peculiar business of that Institution seems to be to wait and beg.

Four years ago I took the Bill granting lands to the Northern Pacific Railroad Company and another railroad bill and from the two I manufactured a bill to suit myself and forwarded it to my brother in the Treasury Department to be presented to Congress. Mr. Denny, the Delegate from the territory, failed to do any thing to further the matter because the road would terminate at Steilacoom instead of Seattle, the little town where he resides. Had Mr. Denny secured the passage of the bill he would have been returned to Congress, but now he had the satisfaction of remaining at home, in quiet.

A year since I left my home about the Sound and came to Fort or rather the city of Vancouver, where I remained two months perfecting a bill to incorporate the Puget Sound and Columbia River railroad company. They are named in the Bill eleven persons (myself among the number) as Commissioners. The Delegates have forwarded to my address the printed bill on which I find the following endorsement:

"H. R. 184, A Bill to incorporate the Puget Sound and Columbia River Railroad Company, Nov. 26, 1867, Read Twice, referred to the Committee on the Pacific railroad and ordered to be printed."

The underscored lines are printed on the back of the printed bill; this shows that the matter is before Congress. A letter from Hon. Samuel McCaw of Steilacoom, dated February 3d, 1868, says. "The news reached Olympia last Thursday that the Bill had passed the House of Representatives and a second reading in the Senate with a fair prospect to become a law." I see nothing of this matter in the newspapers and therefore think that the dispatch to Mr. McCaw has not been confirmed.

The Bill called for the same amount of land per mile as has been granted to the Northern Pacific Railroad Company where it passes through the territories, and should it become a law the grant will be a rich thing for the company building the road. A little effort from proper parties will make it a law.

Enclosed you will find a printed statement which was signed by Generals Grant, Sherman, Ingles and Medical Director Gen. Barnes and about fifty officers of the Regular Army. A particular object for this communication is to inquire if I can interest you privately in locating a terminus upon the Sound for this road in case the bill should pass."

On May 25, 1868, from East Portland, Oregon, Mr. Dolbear wrote me as follows:

"I took the liberty, though a stranger, to address you during the month of April, upon the subject of a building a railroad from Puget Sound to Columbia River. Your able report dated Dec. 1st, 1867 contains powerful arguments in favor of the building of this, and the very great interest I feel in the subject must be my apology for addressing a stranger occupying so high a position.

My residence since October 1854, has been at Steilacoom on Puget Sound, but for one year past I have been in Oregon, expecting to return to the Sound again the approaching Autumn.

There is a point lying midway between Steilacoom and Olympia which I desire to bring to your notice. It is a harbor capable of containing all the shipping of the world and deep enough to float the great Republic or a vessel twice its size. Around this harbor is a tract of country embracing some five to ten sections of one mile square, very thinly settled, which could be purchased for a sum not exceeding five dollars an acre provided the purchase was made by a secret agent before any stir was made about its being the terminus of a railroad. The land once in the hands of a person like yourself could be laid off as a town - a railroad built to the Columbia River. This road would be the great thoroughfare of the North-west, transporting all the imports and exports of that immense region embraced in the limits of Washington, Oregon, Idaho and Montana.

The object of this note and the one previously written, is to interest you and you alone, without the advice or knowledge of any one else, to take the proper steps to build a city or to found one at the above named point and build a railroad, beginning at that point and running to the Columbia about six or seven miles east of the mouth of Cowlitz River. The distance does not exceed one hundred miles and the cost of the road would probably not be greater than the Illinois roads. Of the first forty miles thirty would be built over sandy, gravelley prairie. This would reach the Chehalis Valley, a rich, thinly settled country, whose inhabitants find a market for their produce at Olympia, a town of seven hundred souls, and the present capital of the territory.

There is a great deal said about the building of the Northern Pacific road, and some prominent men in the city of Portland, Oregon, have lately been to the Sound and bought land upon its shores, hoping to secure the terminus of the road; but as that company are always talking and begging Congress and never working, I presume you can, if you are sufficiently interested in the matter, secure the land and lay out your town and have the road half built long before that company will strike the first blow. In that event your town will get the start and secure the trade for all coming time. Every well dressed intelligent Eastern man visiting the Sound now is supposed to be connected with the Northern Road.

Hoping for an early reply, &c."

As the Union Pacific neared completion in 1868, the company saw the necessity of extending their line to the Pacific and in October I received a letter from Mr. Ames authorizing me to make a survey to the Pacific coast from such points on the Union Pacific as I deemed best, and for this work I selected Mr. J. O. Hudnutt and on October 11, 1868 I sent

him the following letter of instructions:

Salt Lake City, Oct. 11, 1868.

Dear Sir: As soon as your work is completed at the Promontory, you will run a preliminary line from our located line, so that a connection can be made on final location between Monument Point and Locomotive springs, north through Raft River Mountains to Snake River, and down that river, having, as an objective point, Walla-Walla on the Columbia River.

As soon as you get into the valley of Snake River, where your party can run without you, take the stage and go to Blue Mountain range and examine the passes through that range so as to determine the approach and passage through them.

I desire to determine the feasibility of the route, its approximate cost, grade and length, and obtain all the knowledge possible of the country in the time we have to make the examination.

In crossing the Mountains where the natural rise of ground is over sixty-five feet per mile, run an angular line to a grade best fitted to the ground; also take triangulations to all permanent points, and get as accurate a general map of the country as possible. and learn what you can of the character of the country from Walla Walla to Portland, Oregon."

<sup>1868</sup>  
On November 7th, I received my first report from J. O. Hudnutt

Boise City, Idaho.

which was as follows:

"Your letter of instructions was brought to my camp on the Promontory Oct. 19th and on the morning of the 22d, I began my surveys on the Oregon branch at Monument Point, sending in one team to Bear River for grain, another to Salt Lake City for supplies.

My trial line ran very direct to the summit of the Raft River Mountains- west of Pilot Springs Station, and I found that summit some higher than Mr. Blickensderfer's barometrical Measure being 5353 ft. Hence I ran back a grade line to an assumed grade of 80 ft. knowing that this grade no cut or fill will exceed 15 ft. The ease with which this grade was distributed leads me to conclude that a grade of 65 ft. can be had ascending from the East, by encountering two miles of heavy work and by 1 1-2 mile increase of distance. Aside from the two miles of heavy line the rest will be fully equal to the Toans Pass line. On the Western slope the grade will be 40 or 50 ft. with almost a tangent line for 25 miles I deflected only 38° of angle. The summit of Pass is at Sta. 1429. Height of summit 5353 ft.

Starting from Hodge's Bench at Monument Point, Raft River was crossed 45 miles from the initial point. Soon as the Snake River Plain was reached, I rode on to Goose Creek and down the river some 30 miles, and became convinced that we must cross the Snake at or near the mouth of Goose Creek before the river begins to plunge into the bowels of the earth.

My supply wagon from Salt Lake City broke down near Willard City and I had to send another team to help it forward; hence I had men camped at Raft River for two days and directed them to repair tents and fix up thoroughly for the winter. Meantime I came on by stage to Snake River Ferry and examined the plain on the south side of the river as far as I could ride and return in one day. This examination and other information satisfied me that the north side of the Plain was far the best; so I sent a messenger to the party with instructions to them to cross Snake River at or near the mouth of Goose Creek. After swinging around the line they would be compelled to come down to the ferry to get over, as the river is deep and no ford can be found. This will delay them a little as they have to travel 50 miles and back again; but I directed them to start one team with all surplus supplies and baggage at once for the ferry, which could be left there, so that they could move rapidly.

After reaching the river I came on by stage, and have been here about an hour. There are no serious engineering difficulties on the route thus far, though the stage passed a portion of the way by night, but I got a very good idea of the whole country thus far. The canons and gulches of the streams putting into the Snake will be the worst feature of the line but by crossing so high up the Snake all canons will be avoided for 60 or 70 miles. We can pass around Kings Hill or between it and the Snake, but

some gulches and heavy ravines must be crossed, as in fact, they occur all the way to Boise.

Approaching the Boise River by stage route there are three very high Benches all cut through this trap rock, but the surveyor General informs me that they fall off gradually towards the Snake River. Here they would be very formidable and it must push the location of the R. R. 15 of 20 miles south of the city towards Onagle.

Tmmorrow morning I shall go out to examine the benches towards the Snake and in the evening push on to the Blue Mountains. Keep me advised where to direct you. Weather perfectly delightful."

As soon as I received this letter from Mr. Hudnutt, I instructed him to leave his party making the surveys following his reconnoisance, and to immediately go and examine the Blue Mountains District, desiring, if possible to get a line over the Blue Mountains instead of following the Snake River around which would make a very extended line and on

1864 November 14th, I received the following letter from Mr. Hudnutt giving me the result of his reconnoissance:

"In compliance with your instructions, I came on to the Blue Mountain District as soon as my party had fairly reached the Snake River Plains. I have crossed the mountains over two passes, going by one and returning by the other. The pass crossed by the stage road I find much the lowest; lower by 800 ft. than by any other pass I have examined, and is reached by following the waters of Grande Ronde River up on the east side and thence into the valley of McKay's Creek, a branch of the Umatilla. The Alt. of the pass is about 4000 ft. above the sea. I find it much the lowest pass in the range for 30 miles either side.

Again the Mt. Makes a very high lift to the north rendering it a very lofty summit and it is almost impossible to reach the head waters of the Walla Walla River, and hence we cannot reach the town of Walla Walla without encountering heavy works and a Mt. summit much more elevated and liable to heavy snows, and as the District from this valley to the mouth of the Umatilla River is about the same as to the mouth of the Walla Walla, there would be a gain of 28 miles in distance toward the mouth of the Columbia River by adopting the more favorable route by the Umatilla River. The valley of the Walla Walla extends in nearly a parallel line with the Umatilla River and at a distance of from 20 to 30 miles to the north. The upper portion of the Umatilla River Valley is at present occupied as an Indian reservation and hence the country is not so much settled as the Walla Wallas, but there is really a much wider scope of cultivation land on the Umatilla than the Walla Walla. I mention these facts as a guide to your decision in the matter of the objective point. As my instructions are now I shall, of course, run to Walla Walla.

We shall not encounter grades heavier than 80 ft on the line I have indicated, and the difference in the fall of snow is said to be 2 ft. In fact, such have been the natural advantages that their <sup>stage</sup> route to the Grande Ronde and Umatilla, <sup>has been adopted</sup> after repeated attempts to keep open the older route via the Walla Walla.

Again I find the Powder River Valley over 37 ft higher than this valley of Grande Ronde, and my first impressions were that a route could be had- as indicated in my report up the Powder and across to the head of the John Day river. But a glance at the Blue Mts. at the head of Powder convinced me of the impracticability of that route, for the Powder heads in the very highest mts. of the whole range. There remains only the route crossing the Snake River near the mouth of the Melheur, thence up that river to Willow Creek and following that stream to its source cross the Mts. to the head of John Day's river to the Dalles of the Columbia. Your instructions did not direct me to examine this last route, but I have made inquiry of responsible men as to the country, snows, &c., and should think it well to have a reconnaissance made of that route before a final location; though I have little doubt

that the route indicated in your instructions, modified by taking the Umtaila instead of the Walla Walla Valleys, will be found the best. Certain it is that the latter route will open the widest extent of valuable farming and grazing lands and a magnificent scope of the finest timber on the continent.

It really does one's eyes good after the wary vision of sage-brush plains to look upon the fine forests of pine and fir whose dense growth completely cover the whole Blue Mountains Range. Let me add here that I am surprised at the extent and richness of the available lands both here and through Idaho, and even the story of their mineral wealth is not half told or developed. Along the Platt, Weiser and Boise beside Snake River itself there is an abundance of water to irrigate millions of acres, and the bottoms along those streams are miles in width, all susceptible of being irrigated and would produce largely. In fact, these rich mountain valleys would support uncounted millions of population, which Eastern men have been made to believe were only fit for the encampment of the miners."

As the survey proceeded, it became very evident that the practical line and the most direct line was to leave Boise City to one side, and this aroused the citizens of that place to make great efforts to force us to build through that city, but the only encouragement I could give them was that we would probably build a branch to it.

On November 19th, <sup>(1868)</sup> from Council Bluffs, I wrote Col. J. O. Hudnutt as follows:

Your letters of November 6th and 7th were received here on the 19th. After you get over the Blue Mountains, if you can keep on down the Columbia to Portland with your line, do so. At any rate go down the Columbia yourself and it is possible you may find the profiles and maps of some line that has been run there.

You may be able to get a good deal of general information bearing upon the general character of the country, its ability to support a railroad, the probable traffic of the Branch. The stone, timber and material for building it, &c. also the agricultural capabilities of the soil; this especially along the line. I want to make a rough estimate of the acres of land in odd sections surveyed and unsurveyed, within 20 miles each side of Central lines; that are susceptible and would pay to cultivate. It is possible we may be forced to build the branch on a land grant. If you meet with Mr. Reed of the Columbia River Navigation Co. he can give you a good deal of information and when you go to Portland you had better call and see him!"

On December 10th <sup>(1868)</sup> Mr. Hudnutt wrote me that he had crossed the Snake River plains, 260 miles from his starting point and he describes this plain as follows:

"This Snake River Plain is by no means a geometrical plain, but is very irregular and full of hollows and trap ridges, base rock and hard which cannot be avoided, there being no trend or shape to them. Soil over the face of the rock very thin even in the hollows, and to cut the rock will be expensive. Such a thing as Snake River valley has no existence, for the river cuts its way through the one yawning canon from near the mouth of Goose Creek to near the Boise River. To get a line along the river is impossible-above this King Hill. Here, as I wrote you, the plain is cut off and we get a cheap line with light work and grades clear down to the river, and below this a tolerable line can be had down the river for 20 ms., that being as far as I have examined. Shall go on as soon as my line is fairly down to the river.

In fact, I am not sure that below this the cheapest line and certainly the lightest grades can be had next the river, for the reason that the irregularities of the plain are so great as to require heavy undulations of grade. Altogether you must expect a rough profile and rather expensive work for 150 miles at least. One thing alone is favorable; very few mechanical structures will be needed, as the drainage is

is mainly through sink holes and numerous springs flow out of the rocky banks of the Snake-almost rivers in volume- with a fall from 50 to 100 ft. These never freeze and by the use of a simple hydraulic ram can be made to supply station with water.

The surface rock where exposed seems to be wholly of this hard volcanic trap and either cleaves into irregular fragments or into the columnar six sided prisms peculiar to basitic rock. But from 4 to 10 ft. below this formation there came layers of stratified rock which though metamorphosed by heat yet retain their character so as to split with ease, and I think will quarry well and though hard to cut will make very durable stone for building.

The Delegate from this territory (in Congress) suggested to some of his friends in my presence that he should have Boise City made to point on this road and named as such in the Bill. Persuade him not to do it; the reasons will be evident to you and if nothing more, we may find it best to keep Snake River clear to Olds Ferry. Such line would be just half way between Omaha and Boise and would accommodate the territory generally."

On February 14th, 1869, Col. Hudnutt had reached the Burnt River and they discovered coal, which he thought gave great promise but when it came to be thoroughly examined, it was not found to be merchantable.

On February 28th, 1869, he wrote me from Baker City stating that forty miles of line in Burnt River was very heavy. The Snake River elevation was 2071 feet above the sea and the Burnt River summit 4036 ft. or a total rise of 1965 ft. for the 40 miles. He gave the distance from Monument Point to Boise as 260 miles; from Monument Point to mouth of Burnt River 334 miles and to Baker City 423 miles, making a total distance to Portland Oregon of 737 miles, all rail. He found light grades down Powder River and into the Grande Rondo Valley as being light work by the use of 65.8 ft. grades.

In running this line to Portland, I also had in mind the idea of getting to Seattle and the question was whether to reach it on the West Base of the mountains or on the East base and I wrote Mr. R. M. Walker, who had been on the surveys in that country, in relation to the Passes and the feasibility of reaching Seattle from where we would strike the Snake River after crossing the Blue Mountains at Umatilla or Walla Walla and his answer to me was as follows:

San Francisco, March 20, 1869.

"I received a long time since your note acknowledging receipt of map and profile of Cowlitz Pass, and regret that I could not have sent one at the same time of the Sno-quol-mie. I have just come across some memoranda of the survey, from which I had made a skeleton map sent herewith, and which is substantially correct.

Fixing upon Seattle or any point below for a terminus of a road, the Sound would be reached at less distance from Walla Walla via the Sno-quol-mie than by the Cowlitz, and while the grades on the eastern slopes would be about the same, the approaches from the west

to the Sno-quol-mie would be much more difficult and the summit may require a tunnel. The Cowlitz is exceedingly favorable and by adopting that route in carrying a line of railroad to the Sound and making Seattle or a point below the terminus a much larger and more valuable scope of country would be included than by the Sno-quol-mie.

The most magnificent timber land in the territory are now too remote from tide water to be made available (and indeed they are not yet needed) which would be easily reached when a railroad is constructed as well as large acres of farming land of the very best quality. Then if the line were continued to that best of all the harbors of the Sound, Bellingham Bay, another large belt of these fine timber lands would be passed through between Seattle and Bellingham and additional large scopes of fine agricultural land, in fact, the whole line from Burnt River to the Sound by way of the Cowlitz, with the exception of one or two short stretches, is skirted by fine grazing, timber and agricultural land.

Should the Union Pacific decide to push a road through from the vicinity of Salt Lake to the Sound, and can get from Congress the privilege of buying a certain number of townships of land as suggested in my telegram, and provided that privilege gives them the right to select at once, and from unsurveyed as well as surveyed lands, it controls the great body of timber lands bordering the Sound, as well as in the Blue Mountains and large areas of the finest grazing ranges on the coast, lying in the course of the contemplated North Pacific road.

The talk of a railroad terminating at Puget Sound has already aroused the land speculators, and large amounts have been purchased during the last 9 months; large mill owners on the Sound who have extensive lumber and timber depots in this city, even going from the Sound over into the Columbia and entering land. The privilege of purchasing these lands on the condition stated would put it within the power of the company to designate and map out the whole amount in two days, and thus put it out of the power of speculators to gobble them up.

Could you, without cost or trouble to yourself, cause to be forwarded to me from Washington a set of Pacific Railroad reports, if they are not all exhausted? I had a full set presented by Gov. Stevens but during my absence in New York some two years since they were destroyed."

1869

On April 2nd, Mr. Hudnutt wrote me from the Blue Mountains Summit that he had just returned from a rough trip through the canons of the Blue Mountains, west side. Snow was two and one-half feet deep and still falling and that with wading in snow and fording deep creeks and continual rain and sleet, they were having a moist time of it; they had only worked two full days in the last ten because of storms. He hoped to get down from the summit of Blue Mountain with an 80 foot grade but it was through a fearful canon for eight miles and then by a pretty good creek to the Umatilla River. Grass was up and crops put in and up, green and flourishing down in the Umatilla Valley, while up in the mountains they had arctic winter.

On April 15, 1869, Mr. Hudnutt made the surveys over the Blue Mountains to the Umatilla River by using 105 foot grades, stating that by adding to the work 80 foot grades could be adopted on location.

On May 5th, 1869, Col. Hudnutt reached Portland. He said the line down the Columbia would be entirely practicable and cheap with the exception of a few rocky points; that it would be far better to cross the river at the Big Dalles, 6 miles above Dalles City, as one center span of 250 ft. would clear the chasm and a span of 200 ft. on each side for very high water would be all the bridging wanted, a most wonderfully cheap crossing for so large a stream. He made the total distance of the line from Monument Point to Portland 730 miles.

On July 1st, 1869, Mr. Hudnutt made his report upon his survey as follows:

"Beginning at a station of the located line of the Union Pacific railroad near Monument Point, (latitude  $41^{\circ} 35'$  north, longitude  $112^{\circ} 4'$  West) where the elevation was 4,214 feet, the line bears north-westerly toward the Pilot Springs Pass of the Raft River Mountains.

In my endeavors to shorten the distance to the summit, the line was run between the two buttes, where there was a gain and loss of one hundred and fifty-six feet of elevation. This loss can easily be avoided by swinging the line further to the left, thus making the whole rise to the summit of the Raft River range only 1,126 feet, or a total height of 5,353 feet. This pass was reached with a maximum grade of one and five-tenths foot per chain, or eighty feet per mile for eight and a half miles has light grades. From this broad, open pass the descent to Raft River, and thence to Snake, is easily made, with grades never exceeding sixty-five feet per mile; the distance to the first crossing of Snake River being 91.1 miles, and the elevation of grade at crossing being 4,200 feet, or twenty-two feet above the water of Nov. 19, 1868.

A line was run skirting the north point of Goose Creek Mountains and keeping close to their base as far as Mountain Meadow stage station, with the design of keeping down the south side, and thus save the two crossings of Snake River, but a hurried reconnaissance convinced me that a better line could be had on the north side of Snake, as well as some distance saved by crossing.

The party was then sent back to the foot of the Goose Creek Mountains with directions to cross Snake River at or near the mouth of Goose Creek. After crossing the line over Snake River we were compelled to pull down with our train to Clark's Ferry, some six miles, before a crossing could be made, and thence return up the north side of Snake River to a point nearly opposite the mouth of Goose Creek, which unavoidable journey consumed a good deal of time, especially in view of the rough and broken character of the Trap Rock plain.

The construction of the first one hundred miles would be very cheap; the crossing of the Snake requiring twelve hundred feet of bridging, and is the only mechanical structure of any note in the whole distance. A very little rock-cutting will be required at the Pilot Spring Pass.

The rich meadows of Raft River and along Clear Water and the Snake would afford abundant food for animals, and the canons on the north side of the Raft River range of mountains abound in pine for ties, &c. in distances varying from eight to fifteen miles from the line.

Soon after crossing Snake River, and opposite Hell's Gate on the map, begins the great trap rock Plain, or plateau of Snake River. This plain is quite undulating, though, seen from a high point, it appears as a broad, smooth surface from forty to one hundred miles in breadth.

The source of this trap rock has been the subject of considerable discussion, though, like the other and lesser trap regions of the Connecticut, and Hudson, it seems peculiar to the triassic and jurassic systems of geology. The lava beds spread over the surface in layers nearly horizontal and overlie beds of soft sandstone and clay shales, and wherever the overlying trap is cut through by erosions or fissures, deep gulches and canons are sure to occur.

Thus the formation of the falls of the Shoshonee, said to be two hundred and twenty feet in perpendicular height, and those of the Engineer's Falls, four miles above the former, abundantly testify to the rapid wearing away of the underlying strata.

Down each of these falls, the whole volume of Snake River rushes with about equal height of leap, into the chasm below. At each fall quite a large island in mid-channel divides the waters, just on the brink of the precipice. Taken together with the awful canons on the river below for seventy-five miles, they form some of the most striking objects of natural scenery ever met with.

The region southwest of Fort Hall is highly volcanic; many cones and deep fissures, with frequent extinct craters, are visible; besides, numerous dikes of trap and basalt cross the Snake at intervals of a few miles. The plain itself is covered in places with a few inches of light soil and sand, upon which flourishes only the hardy artemisia, while at short intervals of a thousand or fifteen hundred feet bare ridges of rock are upheaved fifteen or twenty feet above the hollows, often leaving a cavern underneath covered by roof-shaped rocks sloping in opposite directions from their crests. Over such a country it is impossible to obtain a very light line. Excavations would be rock entirely, and material for embankment would be difficult to procure in many places. On this plain long tangents can be had, but for the purpose of being near water, the line was kept near the edge of the canon.

The drainage for seventy-five miles after crossing Snake River being through the open cracks of the trap rock, no streams are visible up on the surface, though many large springs and a few rivers of volume gush forth from the walls of the canon along the Snake, some 100 feet above the river, forming beautiful cascades of pure water.

At a distance of 180 miles from the initial point a deep and wide creek valley cuts off the entire plain, and the erosion is so extensive as to make it impossible to keep up the grade to the plain level. Add to this, King Hill Mountains butts squarely against the river, with a trend nearly at right angles with it. It being impossible to climb this mountain with railroad grade line, I decided to descend to the river bottoms or benches, which was done with a maximum grade of 80 feet per mile for 4.3 miles. Total descent to the river bench, which lies above high water 535 feet. The beginning of descent is at station 9,060 or 172.2 miles from Monument Point.

After once descending with the grade line to the Snake River bottoms, it was thought better to keep that elevation and run down near the river over the bottoms and undulating benches, rather than to rise again upon the trap plain, here some 700 feet above the river; especially as this whole rise must be again lost before crossing the Boise and Payett Rivers. The trap-rock ridges are also nearly all avoided by the river route.

But truth compels me to add that the distance lost, and the increase of curvature, by the large detour of Snake in the canons below, were both much greater than I had calculated upon.

Before location it will be very desirable to try the line via the plains, leaving Snake River near the mouth of Canon Creek. This line would run half way between Boise City and Fruit's Ferry, or the Owyhee road crossing of the Snake, and descend by the valley of Indian Creek which puts into Boise River in Dixie Valley, and after crossing the Boise keep down the right bank, intersecting the present line near Keeny's Ferry on the Snake and below the mouth of the Boise.

The bridging required for the second hundred miles will be two spans of 100 feet each at the Malade River, and one span of 100 feet crossing Clover Creek.

The Third Hundred Miles from station 10,560 to 15,840.

Near the beginning of the third hundred miles is a trap rock point, projecting some 85 feet above grade, and perpendicular next the river. The distance through it is 400 feet. It is the remains of a well-defined trap dike, once crossing the river; the water at last cutting it through. Large caverns, whose sides are lined with what seems to have been half-melted rock, abound in this ridge, with many holes filled with complete ashes and scoriae. The devil's Chimney was the name given to this Plutonic escape-valve. Crossing this ridge the line follows a crooked canon for fifteen miles, through which, for the most of the route there are narrow benches above high water, offering a line of cheap construction, but heavy curvature. Passing the canon, the river opens into more of a sandy bottom and plain, which extends with few interruptions from ridges, against which the river flows entirely to Olds Ferry. No mechanical structures occur along this division, except a few culverts to pass the surface drainage.

#### The Fourth Hundred Miles.

The first seventy-five miles of the fourth hundred is nearly all a light sand or clay soil, and easy of construction. At station 16,820 (or 319 miles out from the starting point) the Boise is reached, and will need to be spanned by two spans of truss bridge of 100 feet each, while a bridge of 100-foot span will answer for the slough two miles beyond, which, at high water, is filled to overflow with water from the Boise. The Payette, at station 17,812 (or 337 miles) will require three spans of 150 each.

The line then continued down Snake River to station 19,712 (or 373 miles,) where it crosses the river 24 feet above the water surface, and with 800 feet of bridging. The water surface was 2,071 feet, thus showing a total fall in Snake River, from the first crossing near the mouth of Goose Creek, to be 2,107 feet, a distance of 280 miles. Nor will this appear incredible when it is remembered that over 400-feet fall is made in four miles of distance near Sho-sho-nee Falls.

A trail line was run crossing the Snake River three miles above Olds Ferry, and thence across the divide between the Snake and Burnt Rivers, but it was found too high for a practicable grade. Had it been feasible three miles of distance would be saved. Height of ridge is 620 feet above Snake River.

After crossing the Snake five miles below Olds Ferry, the line swings directly into the valley of Burnt river, which it follows as far as Express Ranch, where the main river comes through its mountain canon from the west.

Twenty-five miles of the fourth hundred will be along this river the valley of which is very narrow and crooked, requiring heavy work, with frequent crossings of the stream; twenty-seven bridges in all, of 100-foot span each.

At station 20,415 (or 387 miles) is a tunnel of 550 feet through a ridge which, from the appearance of the rock, will not require, arching. One and a half mile of 80-foot grade also occurs on the last end of this 100-mile division.

#### The Fifth Hundred Miles.

beginning at station 21, 120, near the Express Ranch, and following up the North Fork of the Burnt River, crosses the divide between that stream and Powder River at an elevation of 4,035 feet, within 226 feet of the height of the pass on the Blue Mountain summit. A cut of 40 feet for 500 feet will reduce the elevation of the grade line to 3,995 feet.

This fork of Burnt River has the character peculiar to many mountain streams, having canons through which the creek descends very rapidly, and then opening into large park-like valleys of moderate grade.

In one of these canons five miles of 2.0 grade (or 105 feet per mile) was distributed, and is about the lightest the character of the country will admit. Work very heavy, as well as curvature.

The descent into Powder River can be made with 65-feet maximum grade, with light work and good alignment.

The summit is at station 21, 840 (or 412 miles) and the light work extends along the valley of Powder River for 32 miles to the foot of the grade ascending the Ryle Canon summit, between Powder and Grand Ronde rivers.

This summit is at station 23, 740 (or 450 miles) and is reached by one and a half mile of maximum grade of 80 feet per mile; but this a careful location would reduce to 65 feet per mile. Here is a heavy cut of 30 feet for 1,500 feet in length. Elevation of this summit is 3,505 feet, with elevation of grade, 3,488 feet.

The mechanical structures are small and confined to the two crossings of South Powder, 60 feet each; one of North Powder, same span and two of the main stream of 120 feet each.

Aside from the summit cut, work very light.

The descent from the summit of Powder is made via the Pyle Canon, down which a light line with heavy alignment and 9.2 miles of maximum grade of 1.5 per chain, where the level of the beautiful valley of Grand Ronde is reached, where for 14 miles light work and good alignment are had. From station 24,980 (or 473 miles) begins the ascent of the Grand Ronde River, which is followed for six miles to the River House. There will be nine bridges across the Grand Ronde of 160-foot spans each.

From here a trial line was run continuing up the main stream to the mouth of Ensign Creek, thence up that stream to the summit between the head of that creek and Birch Creek. A reconnaissance made late in the fall had shown me the practicability of this route up the east slope of the Blue Mountains, but I feared the descent would prove too rapid

for passable working grades. The result justified my hastily formed judgment - a good route with light work, good alignment, and 65 feet maximum grade. But the summit required 2000 feet of tunnel; and even that the descent into Birch or McKai Creek valleys was found quite impracticable with any working grade.

Meantime though the snows were three feet deep, and frozen only enough to half sustain one's weight, the passes were examined carefully from the head of Birch Creek along the mountain crest as far north as the Thomas and Ruckle road, extending some thirty-five or forty miles. The only possible descent down the west side of the Blue Mountains seemed to be by the Meacham Creek, a branch of the Umatilla and Dry Creek, a tributary to the Grand Ronde. The pass between these two streams lay two miles south of the Meacham road. The route via Dry Creek so shortened the ascent on the east side as to require a 2.0 grade on location, and the descent via Meacham Creek the same grade. No attempt was made to distribute grades, and the profiles show the beds of each stream or valley.

The snow, as has already been stated, was about three feet deep, and very soft and watery, while more fell almost daily to supply the loss by melting. The labor of working through this and eighty miles of heavy timber made it a truly "hard road to travel."

Height of Blue Mountain summit 4, 262 feet.

Height of grade at summit, 4,235 feet.

The summit cut is thirty feet deep for 1,500 feet. The whole distance from River House via Dry Creek to the summit is 630 stations. Elevation to be overcome, 1,215 feet, showing that a 2.0 grade is the lightest that can be distributed. The alignment of this portion is good for a mountain stream.

The length of a 2.0 descending grade will be 12.2 miles. The Blue Mountain summit is about 493 miles from Monument Point. The end of the fifth hundred miles takes us about seven miles west of the summit.

Sixth Division, 88.3 miles.

Meacham Creek, after running some seven miles in a very direct course, turns suddenly, and to the east, and plunges again into the very heart of the Blue Mountain range, and winding back again, after a very circuitous route, enters the Umatilla. The distance from the summit to its mouth is about twenty miles in an air line, while by the creek it measures thirty-two miles. But this very loss of distance solves the problem of descending the Blue Mountains westward, otherwise they are so near the Columbia River and the low levels approaching tide-water, that the grades must be heavy descending west. On Meacham Creek there will be required ten bridges of forty feet span and fifty-four of sixty feet span.

From the mouth of Meacham Creek the Umatilla River is followed with frequent crossings to its mouth one-half mile below Umatilla landing on the Columbia river, latitude  $45^{\circ} 55'$  north and longitude  $119^{\circ} 10'$  west.

The distance to the Columbia from the initial point being 588.3 miles, twenty bridges of one hundred and fifty feet span each will be required on the Umatilla. Ten miles from the Columbia the Umatilla makes a long bend north, and by keeping in the direction of the back tangents the Columbia could be reached at a point ten miles below the mouth of the Umatilla without loss of distance. From this point to Portland, Oregon, would be about 145 miles or a total distance of 723 miles from Monument Point to Portland, Oregon.

The elevation of the water surface of the Columbia at the point of junction was found to be, on the 18th of May, 1869, 298.16 feet; extreme high water 313 feet; extreme low water 288 feet.

A reconnaissance was made down the Columbia to Vancouver and Portland, developing the fact that a light line can be had with only a few rocky points. Probably the best route would cross the Columbia at or near the Big Dalles seven miles above Dalles City, because here the channel narrows so much that a single span of two hundred and fifty feet would cross the river; but as extreme high water rises over this basaltic bench some ten feet, it will be well to flank the main bridge on each side with one span of two hundred feet, to give sufficient water-way.

#### Routes to be examined.

Before deciding upon a location it would be well to take up the line left at Mountain Meadows and continue it down the south side of Snake to the mouth of the Malheur, and ascending the north fork of that stream, cross the Blue Mountains' summit at the head of John Day's River, and down that stream to the Columbia.

The advantages of this route, if found practicable, would be in the two crossings of Snake River, and the saving of grade, which can be stated as follows: The elevation of Burnt River summit is 4,026 feet; the descent into the Valley of Powder is 821 feet; rise to the Pyle Canon summit, 300 feet; fall into Grand Ronde Valley, 754 feet, or a total loss of elevation of 1,875 feet.

But these advantages may prove more apparent than real when put to the instrumental test. The John Day River is very crooked, and plunges through a deep canon.

The advantage of the route via Ham's Fork, Soda Springs, and Port Neuf Gap is so ably discussed in your report as to need no endorsement from me; and by this route, after crossing Snake River near Fort Hall, the line could be swung so far north as to reach the open, grassy plain of Kamas Prairie, by which fifty miles of the Trap Rock Plain would be avoided, with the advantage of timber and water.

The materials for construction are generally abundant and near at hand. The trap rock is underlaid with a strata of metamorphic rock, which, though hard to cut, will make durable building stone. Ties can be procured from the head of Clearwater and from timber in the canons of the Raft River and Goose Creek ranges. Along the Malade are small bodies of timber; but in the mountains, at the forks of the Boise River, there is plenty of excellent timber, which is now being driven down and caught by booms at Boise City. On the Payette are extensive forests of pine and fir, with a fine, open river for driving logs clear to Snake River, and timber could be rafted down that to Olds Ferry. On Burnt River most of the line is close to fine bodies of excellent timber, and from Burnt River summit for over one hundred miles the line is near or runs through magnificent forests of pine, hemlock and fir.

The amount of agricultural and timber lands in a belt, say twenty miles each side of the line, is estimated as follows:

Number of acres along Raft and Snake Rivers	-----	700,000.
Number of acres surveyed along Boise, Payette, and the		
Snake River plain	-----	13,800,000.
Number of acres between Payette and Olds Ferry	-----	200,000.
Number of acres on Burnt River and branches	-----	60,000.
Number of acres on Powder River and branches	-----	240,000.
Number of acres on Grand Ronde and branches	-----	240,000.
Number of acres on Umatilla River and branches	-----	500,000.
Number of acres of splendid timber on the Blue Mountains	-----	1,000,000.
Total acres	-----	16,740,000.

But the whole of the Blue Mountain range and the grass plains, from their base to the Columbia, and thence to the Dalles, are the richest pastures in the world. Thirty thousand head of Indian stock feed all winter without hay or grain upon the bunch grass of the Umatilla alone, and these grass lands are not included in the above estimate. Nor should we forget to mention in the estimate of resources of this country the vast importance of its mineral wealth. I send you a statement from the obliging agent of Wells, Fargo & Co., Mr. W. A. Atler, of Boise City, of the estimated amount of bullion and dust shipped from the Idaho mines.

Many large and promising districts have hardly been opened yet, on account of the high prices of wages and the difficulty and cost of getting machinery. The rich district of Yuba, Rocky Bar, and Alturas have only just begun to develop, and rich mines may certainly be looked for along the head of the Bruneau Malheur, and in fact along the whole range of the Blue Mountains. Copper leads of great extent and richness abound also in these mountains, and their splendid timber is needed through some of the mining camps, and would be a source of great traffic with the towns along the route clear to Salt Lake Basin. The whole mercantile trade of Idaho, eastern Oregon, and Washington would change front with the building of this branch, thus, furnishing business for itself, but acting as a tributary to the whole line of the Union Pacific railroad from the point of junction to Omaha. This route would have the advantage in the question of snows of any other crossing the continent, (with possibly the single exception of the extreme southern.) The heaviest snow-falls occur in the Blue Mountains towards spring, and are soon melted; besides, the snow field is short, not to exceed twelve miles, and last winter the deepest accumulation was not over three feet.

Mr. John Hailey, who has had the mail contract from the Dalles to Boise City, states that his stages have never missed a trip on account of snows from 1863 to 1869. By this route the Cascade Range (which from its position so near the Pacific coast receives a very heavy snow-fall) would be avoided; for the magnificent Columbia has opened up a route through this range, which, but for its assistance, owing to snow-fall and heavy grades, would have offered an obstacle to railway building, the counterpart of the Sierra Nevadas.

Trade and commerce.

The freight tariff from Portland to Umatilla City is \$30, coin, per ton measurement, and from thence supplies are hauled by wagon road and packed by mules across streams and over mountains, where heavy tolls are everywhere collected for the rudest roads and trails. Notwithstanding this there has been landed at that point alone, from fifteen to twenty thousand tons per year, and at Wallula and points above, some five or six thousand more. And though a large surplus of grain is raised in the valleys of the Walla-Walla and Grande Ronde, which with a market would be increased many fold, yet freights are too high to warrant them even in trying to ship their surplus.

With wages ranging from \$6 to \$8 per day, coin, and such tariffs on supplies brought in for consumption, it is a wonder that any of the mines have paid the cost of working. No better proof of their richness need be had than the fact that, in the face of all these drawbacks, this region has shipped in the past year over \$9,000,000 bullion and dust, and this, too, with the mines less than half developed and many sections unexplored. It is safe to say that with cheap labor and freights the production of the precious metals, from Idaho and Oregon alone, would reach \$25,000,000 per year.

In conclusion, let me express my indebtedness to George Bent, J. H. Collins, and Louis Von Froben, my assistants, for their energy and hearty cooperation.

Very respectfully, your obedient servant,  
J. O. Hudnutt."

When the Oregon Short Line was built, it started at the mouth of Ham's Fork on the Union Pacific and took the Bear River survey of Hodges through the Port Neuf Gap, striking the Hudnutt survey in Snake River Valley and following it through to Portland.

In 1870 I went to Oregon for the purpose of examining that country personally and I discovered that the key to the situation there was held by the Oregon Navigation Company and tried to induce the Union Pacific Railroad Company to purchase it. I personally negotiated for the purchase of it, but the railroad company, with the troubles they had in settling up their debts and other matters, kept postponing it until the purchase was finally abandoned by them. I met Mr. Henry Villard, who was a friend of mine since the War, and talked to him, as he was greatly interested in the Oregon country, and I told him fully of my surveys--what I had developed and also about the Oregon Navigation Company, what it controlled and what a valuable property I thought it was. He afterwards went in and bought this property and in the controversy which occurred between him and the Union Pacific afterwards, he stated in ~~the~~suit there that he had bought the property on my recommendations. Later on in 1872 the Union Pacific railroad concluded to build the Oregon Short Line and let the contract for it, and covered the road with men. At the same time, Mr. Villard who was now the owner of the Oregon Navigation Company commenced building from Portland East with a view of meeting the Union Pacific and keeping them out of Oregon. The two lines met at Huntington, near the mouth of the Boise River and they were run for a long time as two separate companies, but this was not satisfactory to the Union Pacific.

They saw the great mistake they had made in not pushing through to Puget Sound and they leased the lines from Huntington to Portland from the Oregon Navigation Company. Operating the road under this lease with the conditions and the obstacles that the Oregon Navigation company placed in the way of the Union Pacific caused them to endeavor on the market to buy up the shares of the holding company which owned the Oregon Short line from Portland to Huntington. This was in 1892 if I remember rightly, when the individual members of the Board of Directors and some otherws went into the market and endeavored to buy a majority of this stock, but they failed. We only had a minority. Our endeavor to buy this stock brought on greater friction between the Union Pacific and the Villard parties and it became necessary to come to some agreement. Mr. C. F. Adams, who was the President of the Company, and Mr. Villard had had personal differences and Mr. Adams, Ames and Dillon came to New York to see me, to endeavor to get me to negotiate with Mr. Villard for the purchase of the road. At that time I was laid up with a severe attack of rheumatic gout, but after studying the matter, I came to the conclusion that there was only one way to settle the matter and that was to place the Oregon short Line's part of the road running from Portland to Huntington in a receiver's hands, if possible, on the grounds of their not carrying out the lease, and as the election was coming off that week, notwithstanding that I was still on crutches, I took the cars for Portland, Oregon, at Omaha, taking with me Mr. Thurston, our Attorney and Mr. Holcomb, the General Manager of the road.

On arriving in Portland, I found that Mr. Villard was also there and I immediately had an interview with him. We were personal friends and he said to me immediately that there was no use to quarrel over this matter, that we could settle it amicably. I told him I was prepared to place the road in a receiver's hands, but I was willing to purchase, and I made an agreement with him to purchase the interest of the Oregon Navigation line from Portland to Huntington and in payment turn over the stock of the holding company which we had purchased on the market at a certain price. I think he fixed the price of the Oregon Navigation stock at about par. I agreed to make the purchase on the prices named. I considered them very favorable to the U.P. Company.

I immediately called in Mr. Thurston and Mr. Holcomb; they suggested that before we closed the agreement that we should consult Boston. I said, "No." that as soon as they found I could buy, they would want to drive a sharp bargain; that I had full power and proposed to close that agreement before I wired them.

Mr. Thurston and Mr. Villard's Attorney, drew up the papers, they were signed, and when I wired Boston, as I expected, they came back with their objections and suggested different conditions. I answered them by telling them I had closed the trade; that it was a great bargain for the Union Pacific and that to undertake to haggle about the matter would only have brought us trouble and probably lose us the property. There was quite a sum due us from Mr. Villard in the trade and instead of giving me his notes or the notes of his company, he gave us the notes of his brokers with security. This was one point which the company objected to but for some reason Mr. Villard did not want to give out the notes of the company and let it be known that the trade had been made.

When I returned to Boston and explained the matters fully to them, and the difficulties I had met there, they were fully satisfied and the purchase of the property has been a great element in the earnings of the Union Pacific and in its value.

When I got to Oregon, I found that the sympathies of the people and the courts, etc. were all with Villard and there was considerable doubt whether I could obtain a receivership or not. When the Union Pacific was reorganized, after being in a receiver's hands, they only took first the main line. I thought this was a grave mistake. While I was in the first reorganization committee, I was not on the second, but I made known my views in relation to the matter but they organized the road separately, the Boston parties taking the Oregon Short Line and the New York parties the Union Pacific property, but within a year Mr. Harriman saw the necessity of having the Oregon Short line and they were forced to pay a very much larger sum for it than they would if they had taken it in the original organization and today the Oregon Short line is as big or larger earner than the main trunk line.

THE MISSOURI RIVER BRIDGE.

During all the time of the construction of the Union Pacific Railroad, it operated the road from the West side of the Missouri River, but its charter extended across into Iowa and early in the construction, the question of how to bridge the river came up. I had had careful meanderings made of the river and surveyed several lines crossing it. There were a great many discussions in relation to the location of the bridge. As the results of my surveys, I made two reports to the company--the first on December 3, 1866, and the second in January 15, 1867, which set forth the different lines and the cost of each, and were as follows:

New York, December 3, 1866.

T.C. Durant, Esq.,  
Vice-President and General Manager,  
Union Pacific Railroad:-

Sir:- I have the honor to submit for the information of the company, such data as the surveys of the Missouri River, so far as made, have furnished, having in view the proper point to bridge the river; and the approaches to the bridge from the East and west.

The river has been systematically sounded, to determine generally the depth of the water, sand and the material that piers would rest on.

Rock has been discovered at several points, but as yet not entirely across the river; the pipe sunk on east side having gone through the sand, and reached a hard substance that we could not force through with the usual means.

Taking into consideration the approaches, east and West, on the river, I hold that we are confined, in bridging the stream, to a distance of some eight miles, included between the Buschey Ferry, and Child's Mill. The high-water table on the east side, approaches very near the bank of the river for nearly four miles of the distance, while it is not over one and one-half miles off, on any portion of this front. In this distance, four crossings have been pretty thoroughly examined, viz:

I. The point at Telegraph Poles.  
II. The crossing near where the N. & M.R.R. line strikes the river.  
III. The crossing about two miles below, at the ravine above the Stone Quarry.

IV. The crossing at Child's Mill.

The first at Telegraph Poles, I consider the best for a low bridge with draw; and the crossing at Child's Mill the best for a high bridge.

The approaches to all the crossings are equally feasible on the east side; on the west side, the first would end on our depot grounds at Omaha.

The second is on the table just south of the city, and would go into Papillion Valley on our present line.

The third could be brought up the river to the depot, or go out over the south part of the city; or what would be probably better, follow up the ravine opposite the crossing, and cross the divide at a new point south of present crossing, entering Mud Creek Valley about one mile below the present summit. This line has not been fully surveyed, but it is thought we may get through on a thirty foot grade.

The fourth or Child's Mill crossing, follows up a ravine opposite the crossing, cutting through the divide, and in one mile from the river strikes the Mud Creek line, some five miles from Omaha, shortening the line about seven and a half miles over Crossing Number 1, and avoiding the three miles of sixty-six feet grade at Omaha; as Mud Creek is reached on this line with a thirty-foot grade. The summit cut is one hundred and five feet deep at its highest point, and with a base of twenty feet, and slope of one-quarter to one, has about one hundred and seventy-five thousand cubic yards of earth to waste.

A bridge at Child's Mill has the advantage, on the west side, of abutting against the high bluff; and, second, a narrow river, and bridge, well protected from the wind by bluffs, on west side, and timber on east. A high bridge, at this point, would have one and one-half miles of trestling or embankment on the east side to reach grade. It would be eighty feet high above foundations, and would give fifty feet in clear from extreme high water to bottom of lower chord; and would not cost any more than a low bridge at Telegraph Poles.

The grading on east side would cost about one hundred thousand dollars, which would be in addition to cost of bridge.

A low bridge at or near Telegraph Poles, is estimated at two thousand one hundred feet long, having one half mile of trestling on each side. The river, at this point, has not materially changed in several years, while above and below it has changed from three hundred feet to three-quarters of a mile.

The extra cost of turn-table draw and centre pier, brings the bridge, in cost, up to that of high bridge at Child's Mill; and even if the bridge is located here, I feel disposed to urge upon the company the building of a high bridge. My reasons are briefly:

First:--It does away with all expenditure in confining the channel, which I consider an experiment. No theory that I know of will meet such a question. It is a matter to be decided by our observation of the river--our experience on it--and, finally, by actual experiment. We might invent a plan that would confine the channel at first trial and with little cost; or we might sink a large amount of money and even then not succeed.

Second:--It relieves the Company from the hostility of the boating interest; gives no excuse for the long list of lawsuits that all draw-bridges have had to meet; obviates unfriendly legislation, and gives a boatable channel under the bridge at all seasons of the year, no matter what freaks the yearly freshets may play with the river.

Third:--It is almost impossible to place obstacles in current of channel that will turn it. The cause of change of channel, which seldom remains at one point during one month of the year, is the fact that it cuts the bank on one side or the other, or both, until its course is naturally changed, from the distance and direction it eats into the bank--not from the obstruction it meets; and the moment the channel begins to change, it deposits its sediment in the old channel, cuts it entirely off, and gradually fills it up.

Fourth--A high bridge being built, all expense has been incurred the trouble of the draw avoided, and all accidents obviated, and it will give better satisfaction to all interests. And I believe that if the Company build anything but a high bridge, they will always regret it, and it will always be a source of annoyance, legislation, and cost.

Fifth--The cost of a high bridge over a low one, when you take into consideration the uncertainty of the cost of confining the channels to the draw, is not enough, in my opinion, to overcome any one of the objections to a low bridge.

These, and many other reasons, that it is not necessary for me to mention here, induce me to be decidedly in favor of building a high bridge, no matter what point of crossing the river you may select. At Telegraph Poles it will cost most, but not over one hundred and fifty thousand dollars more than any other point mentioned. You can rise to it on a fifty-feet grade, running up each side on a trestle one mile long.

A high bridge is only thirty-five feet higher than a low bridge, as ice and drifts make it necessary that low bridges should have at least fifteen feet in the clear between extreme high water and bottom of lower chord.

The foundation at Telegraph Poles, at one point is rock over two-thirds of the distance across, and at another point about one-third; at all other points, pile foundations would have to be used. At Child's Mill, if foundations are put in during low water, only two piers, and perhaps but one pier would come in the water.

I submit herewith an approximate Estimate of cost of bridges, made from the best data at hand, being governed in prices by what our limited data indicate to us as a fair cash value. The stone for masonry, if obtained from the Platte River Quarries, would have to be hauled seven to nine miles to reach the railroad, and ten to fourteen miles on railroad. Quarries are being developed on North-western railroad, right on the line of the road, which may be made available. The quarries are on the Platte we know to be good and available. Near Pacific City, on Council Bluffs and St. Joseph Railroad, some fine

quarries are being opened. I have not seen them, but am told that they are superior to any others in feasibility of working, quality of stone, and thickness of course; if this be so, they are the nearest, and can be made available with less expense than any other, as the Council Bluffs and St. Joseph Railroad runs right alongside of them, and would be within a short distance of any of the bridging points.

The cost of foundations is a matter of conjecture, as no such work has as yet been done in the Missouri River. I have estimated at usual cost of such work; and I desire it distinctly understood, in submitting this estimate that I have not made a close calculation, aiming merely to give the Company something of an idea of the quantities and about the cost of the different kinds of work

High Bridge, at Child's Mill.

4,250 C.Y. Masonry to Piers, at \$20.00 - - - - -	\$85,000.00.
1,250 " " " Abutments at \$20.00 - - - - -	25,000.00.
12,780 lin. ft. Piles in foundation, \$1.50 - - -	19,305.00.
121,000 lin. ft. B. M. Timber in foundation, at 50 cts. - - - - -	6,050.00.
2,000 lin. ft. of Truss, at \$65.00 - - - - -	130,000.00.
1,570,814 ft. B.M. Timber in Trestle, at \$50.00 -	78,540.00.
Engineering, 10 per cent - - - - -	34,389.00
	378,284.00
Cost of 1 mile road west side - - - - -	150,000.00.
	528,284.00.

Low Bridge at Telegraph Poles.

1,650 C.Y. Masonry in Piers, at \$20.00 - - - - -	33,000.00.
420 " " " Abutments at \$20.00 0 0 0 0	8,400.00.
874 " " " Centre Piers, at \$20.00 - -	17,480.00.
12,000 lin. ft. Piles in foundation, at \$1.50 -	18,000.00.
108,000 ft. B. M. Timber in Crib, at 50 cents -	5,400.00.
1,362,500 ft. " " " Trestle, at 50 cents -	68,120.00.
6,666 C.Y. Stone in Crib, at 5 cents - - - - -	33,300.00.
708,950 ft. B. M. Timber in trestle, at 50 cents	21,268.00.
1,800 lin. ft. Truss, at \$65.00 0 0 0 0 - - -	127,000.00.
300 lin. ft. Truss - - - - -	31,500.00.
Turn-table - - - - -	6,500.00.
Engineering, 10 per cent - - - - -	33,997.00.
	406,975.00.

In a purely engineering point of view, without regard to the advantage of crossing directly at Omaha, or the use of our own depot grounds, I am decidedly of the opinion that the best point for bridging the river with a high bridge is at Child's Mill. It is shortest, gives best grades, and leaves out entirely the sixty-six feet grade at Omaha.

A bridge here can be put up in low water, in shortest time, with least cost, and gives us a high bluff to abut against on west side, with plenty of distance to rise to grade on east side, and shortens through distance seven and one-tenth miles.

Second--If desirable to avail ourselves of the crossing at Omaha, for the use of our shops and grounds, the best point of crossing for a high bridge is at or near the present crossing of the M. & M. R.R. line. A high bridge here will cost more than at Child's Mill, on account of the necessity of increased length on west side to reach table south of city, while it has the advantage at east side of reaching high water table, six hundred feet from bank of river

Third:--If low bridge is decided upon, the point at or near Telegraph Poles is best, and this point has the advantage of being one-half, and perhaps three-quarters, on rock bottom. It is also the best point, in my opinion, for confining the channel, from the fact that the river has not materially changed at this point at least eleven years, and it is easier to hold a channel in its natural course, than to force

it out, as would have to be done at some other points to conform to the draw.

The distance on east side of river at this point, to high-water table, is about two thousand feet; on west side, high-water table will not be reached until grade strikes the depot grounds.

The distance over different lines is as follows--between a common point at Council Bluffs--say, east line of Section 3--and the common intersection in Mud Creek Valley:

Child's Mill Line	- - - - -	6.14 m.
M. & M. R. R. Crossing	- - - - -	9.84 m.
Telegraph Poles Crossing	- - - - -	13.69 m.
From N.W.R.R. Depot and Telegraph Crossing	- - -	13.53 m.
N.W.R.R. Depot and Child's Mill	- - - - -	7.14 m.

All Crossings except Child's Mill, will use the present track west of Omaha, and have three miles of sixty-six feet grade to overcome.

Child's Mill crossing has maximum grades of thirty feet only; it is three and seven-tenths miles shorter than the M. & M. Crossing; seven and fifty-five hundredths miles shorter than Telegraph Poles crossing, and six and fourt-tenths miles shorter than direct crossing by Telegraph Poles from North-western depot grounds; and taking these grounds as a common point, it is five and fountenths miles shorter.

The masonry in piers and abutments can be materially reduced on high bridge, by running over upper chord on that portion of bridge over the low bottomw each side of the river, and through the bridge over the channel of river. The estimates have been made for running through bridge for entire length.

The surveys on the river are being pushed forward, and when completed may indicate some point more favorable for a crossing than any of those mentioned; but I am convinced that generally, the features above indicated will not be changed. A detailed examination of the river may lead us to locate the bridge a few hundred feet north or south of any one of the above points, which will not change the general location, or the approaches to the bridge.

I am, very respectfully,

Your obedient servant,

G. M. Dodge,

Chief Engineer."

#### SUPPLEMENTAL REPORT.

Engineer's Office, U.P.R.R.

Omaha, N.T. January 15, 1867.

T. C. Durant, Esq.,

Vice-President and General Manager,  
Union Pacific Railroad,

No. 20 Nassau St., New York.

Dear Sir:- I have the honor to submit herewith the additional maps, profiles and estimates of bridge across the Missouri River.

My former report was based, to a considerable degree, upon data from only partial surveys. The surveys then being made have been completed, and the data submitted herewith is the result of personal examination and actual survey.

The sounding parties are all at work giving the river bed a thorough examination at three notable points for bridging, viz: Child's Mill, Table south of Omaha, and Telegraph Poles.

The Child's Mill line I discussed in former report; the additional surveys made, go to substantiate all said in relation to that line, and add to its feasibility. Estimates are attached, marked "A". The line on table just south of our present railroad line through Omaha has been given a thorough examination, and I submit estimates attached, marked "B".

"A, C, M." I feel sure that it is practicable to go out on the line marked "B" on map near the present railroad line, with thirty feet grade,

that it is also practicable to swing north from bridge and go to our depot grounds on a new line, or on the line now built. We can also, without much difficulty, curve to south from west end of bridge, and take the line run by Mr. Ainsworth, going into Mud Creek at point "I" on map. So that all the points unsettled on this line, when my former report was made, are settled in its favor. It will be seen that the great width of the river and bottom land at this point, makes it cost two hundred thousand dollars more than at Child's Mill, after increasing length of Child's Mill bridge one thousand feet.

I submit profile of line for low bridge, at Telegraph Poles, marked "a,b" with estimates attached herewith; also profile of Ainsworth line, which should be considered with it, giving a thirty foot grade to Mud Creek at Station 366 on map, marked "G, H., I."

This crossing I consider best for low bridge. Rock has been found for a distance of 1,500 to 2,000 feet above Telegraph Poles and across Sand Bar, when it drops off. The question of foundation, I think, is settled favorably for all crossings, as we can sink our piles about thirty five feet at most all the points and fill them with rubble, and make our foundation perfectly safe.

Piers in bottom land rest on concrete; at Telegraph Poles we can rest a portion of our foundation on rock bottom and a portion on piles.

My late examination of river renders me more decided in favor of high bridge. The fact that we can overcome all objections to high grades, avoid all lawsuits and injunctions, all expense of confining channel, and not in any way be dependent on future uncertainties and experiments in confining our channel, avoid all difficulty of swift current through draw, and the great obstruction of centre pier in such a river, appears to settle the question in favor of high bridge. As a general rule, past experience has taught us not to build a low bridge over a navigable river, when a high one can be built without materially increasing cost.

Estimates for bridge have been made from soundings on best location for each line; masonry estimated over bed of river for running through bridge, and over bottom land to run on top chord of bridge.

Foundation for piers in river is piles and rock bottom, on bottom land is concrete. Trestle work is estimated with double posts with the intention that before it will have to be replaced it will be made permanent bank. Prices have been set upon the work that our past experience tells us it can be done for.

Stone can be found near Bartlett Station, on Council Bluffs and St. Joseph road, sufficient to build the bridge. It can be loaded in vars for \$1.50 per cubic yard, and be delivered at river at \$2 at highest per cubic yard, making \$3.50 per cubic yard delivered.

We have estimated for superstructure of "Howe's Truss" for high bridge and all spans of low bridge, except centre span. The centre span of the low bridge is iron truss three hundred feet long. Act of Congress requires three hundred and fifty feet for bridges over Mississippi and Missouri Rivers in all charters granted last winter.

An iron truss for high bridge is preferable, but will cost nearly twice as much as "Howe's Truss"; still I think, in the end it will be better policy, and more economical to use it. So important a structure should take advantage of all improvements that genius and experience have added to any old plans or material.

Iron bridges for such spans and work, are being used in all structures of as much importance as this. It is considered to be much more economical in the end, and by far the safest; if wood truss is used, I recommend Howe's.

I believe the maps, profiles, and estimates and my former report with that now submitted, will give the company sufficient data for them to fully understand the questions, and decide the location.

I consider the subject in a purely professional point of view, and in an engineering point of view there seems to be no question as to the best location of the bridge, and that is near or at "Child's Mill."

I can reduce length of bridge here easily, if desired, by crossing at narrowest point of river, and going up another ravine connecting with railroad in Papillion Valley instead of Mud Creek, as shown on map and profile by line marked "A,F,O."

The Child's Mill location has the great advantage over all other points of saving distance. The high bluffs on the west side to abut against, the course of channel fixed by formation of valley at this point, narrow river, the protection that bridge has from bluffs and timber and the fact that the river nearly washes bluffs on the west side,

with a direction to the current that will always hold it to that side; also the distance saved on all through freight, travel and traffic, decreases running expenses, with the avoiding of high grades, striking Mud Creek so low that very little expense is incurred in reducing the Mud Creek grade down to thirty feet; and the fact also determined by our surveys that we can reach our depot grounds at Omaha, from west end of bridge, by falling gradually to valley of Missouri River, and running up the valley to Omaha.

These advantages and others that have been brought before the Board, decide beyond question that this is the location for a bridge in a purely engineering point of view.

The question of a commercial point at Omaha; of the use of our depot grounds at that place, and the better satisfaction it will give the people of that city; and how much these should weigh against the nationality of the work, the engineering advantages, the distance saved, the distance hereafter saved in running, the percentage gained on all traffic going from the Atlantic to the Pacific; and the fact of the location not only being made for the present, but for ten, twenty and one hundred years hence, are matters for the company to consider.

If the local interests of Omaha and our own expenditures at that place--our grounds and shops--are sufficient to overcome extra expense and cost, the engineering advantages and the facts mentioned, then the location just south of present road in Omaha is the best; and this is the second best point for high bridge on the river examined.

The objection heretofore urged to this point of not being able to go west near our present road on a thirty foot grade is avoided by our last survey; and our depot grounds made available and the commercial interest of Omaha satisfied. If allowed to run to the summit on a forty-foot grade, I can cheapen the line from west end of bridge materially; and I cannot see the objection to it, as our built line down Mud Creek and up Pappillion has several forty-foot grades. We can also, on this location, use the old road until such times as increased business demands change of grade on east side of summit.

The thirty-foot grade from bridge at this point runs us down to level of valley most too far east for good connection with western roads. I would therefore recommend, if bridge is decided upon at this point, that we approach on east side with forty-foot grade. It would reduce cost of trestle and bank.

As to low bridge, the question as to confining channel, the increased swiftness of the current and proper means to avoid it, the danger from lawsuits and other objections discussed in my former report, I think we should, if possible, avoid. You fully understand and can determine these better than I.

The confining of channel within limits of natural bank of river turning of channel at all seasons of the year, through draw, without an increase of current that will render it objectionable, I consider an experiment that no one can predict the cost, time, trouble or expense of. But if the bridge is decided upon, I recommend the point at Telegraph Pole. To reach our depot grounds at west end of bridge, that portion on bottom would have to be on a curve, and probably trestle on east approach.

The river is now threatening this location from Buchey's Ferry, to point of turning south.

The systematic soundings and surveys being made at Telegraph Pole, at crossing south of Omaha and at Child's Mill will render us fully able to finally locate position of piers of bridge on either line you may select.

#### Table of Distances.

Child's Mill line, marked on map "A, E, K. 2 - - -	5.84 miles.
Child's Mill and Pappillon Valley, marked on map, "A, F, O." - - - - -	8.77 miles.
High crossing south of railroad in Omaha, marked on map "A, C, M. K. - - - - -	9.27 miles.
Low Bridge at telegraph crossing, and Ainsworth line, marked on map "A, B, G, H, I, K. - - - - -	12.33 miles.
Low Bridge, N.W.R.R. grounds, telegraph crossing, present track with sixty-six feet maximum grade, marked "N, B, G, M, L. K, - - - - -	12.30 miles.
Low Bridge, N.W.R.R. grounds, Ainsworth line, with thirty feet grade, marked "N, B, G, H, I, K, -	11.82 miles.

Distances compare as follows:

Child's Mill line, "A, E, K," shorter than  
on table south of Omaha, "A, C, M, K, - - - 5.44 miles.  
Child's Mill line, "A, E, K," shorter than  
line by Telegraph Pole, marked on  
map "A, B, G, H, I, K," - - - - - 6.50 miles.  
Child's Mill line shorter than line from  
N.W.W.R.R. by Telegraph Pole, sixty-six  
Feet grade, marked "N, B, G, M, K, L, - - - 6.47 miles.  
Child's Mill line shorter than line from  
N.W.R.R. depot grounds, via Telegraph  
Pole depot grounds, with thirty feet grade,  
marked "N, B, G, H, I, K," - - - - - 5.99 miles.

It will be observed that these estimates are made for bridge proper; and for a road to be built from a common point on east side of river, to the intersecting point on our line in Mud Creek Valley. That I have increased price of trestling over old estimate from \$50 to \$90 per thousand feet, and truss from \$65 to \$80 per lineal foot, as in former estimate. I understood truss was delivered at Omaha for \$65 per lineal foot, while I find it was delivered at Chicago at that price. \$15 per lineal foot is added for transportation from Chicago to Omaha.

Masonry is put in at \$20 per cubic yard. This change in prices makes the difference in cost of bridge proper as compared with former estimate.

In that estimate I did not estimate approaches as I have in this. In the estimate now submitted, I have increased length at Child's Mill bridge from two thousand feet to three thousand feet, throwing one thousand feet more on east side of river to avoid all contingencies from high water, &c.

Bridge at Child's Mill, line "A, F, O." can be reduced to two thousand feet on line "A, E, K." I believe it would be safe at two thousand five hundred.

I do not estimate for any unusual obstructions in building of bridge. I estimate what bridge would cost, built in usual manner, with usual contingencies. And although the Missouri river has never been bridged, or its currents and sand contended with in putting in foundations, yet I do not anticipate any unusual difficulties.

Neither have I, in low bridge, given any estimate for confining channel, or turning it at all seasons of the year into draw, without increase of current. This is also a matter of experiment, and merely guess-work as to cost.

The line marked A, D, L, K, on map, known as "Stone Quarry line" (you have map and profile in New York), I don't consider or estimate, as it is impracticable in comparison with other lines.

I am, very respectfully, your obedient servant,

G. M. Dodge,

Chief Engineer."

The map which accompanied these reports is printed with the reports in my book known as "The Union Pacific Railroad Papers."

Reports were also made on this crossing by Col. Silas Seymour the consulting engineer and by Mr. J. L. Williams, the Government Director and also by citizens of Omaha.

The contention of Seymour and the Company was for the low draw-bridge. I was absolutely opposed to this because <sup>across</sup> the bend of the river just north of it was hardly half a mile apart and I was satisfied with the way the river was working that it would soon cut through and that would have left the bridge at the telegraph pole on

dry land. Since the bridge has been built this has occurred. The river has materially changed at that point. Mr. Jesse L. Williams agreed with me on this but after various contentions and discussions, the bridge was finally located upon my final location at what was known as the M. & M. crossing, or the high crossing south of Omaha. This was located there by the company upon ten acres of station grounds and heavy subsidy given by Omaha. They were very much opposed to the bridge being built to Child's Mill but fearful that it would be of great detriment to their city. The commercial value of Omaha to the company was another consideration.

After the final location was made, then the question of what kind of a bridge and the kind of foundations that should be used had to be determined. Our soundings had shown that there was no rock bottom except at a short distance to Child's Mill and at Telegraph Pole, and that rock was not suitable to plant piers upon. The quick-sand was so deep that it was impossible to put in piling for a foundation for the piers. At that time sinking piers by the air method was not known to any great extent. There had been only one bridge built in this country by that method--that was the bridge in New York City across the Harlem River. It was said that by that method you could sink a pier forty feet.

I got into communication with the engineer who had built that bridge, Mr. Frederick E. Sickles, and it was through the information I obtained from him that I finally decided to sink iron columns with the air process for the piers and that brought up other great contentions from different engineers and to show what extent we made examination in this matter and as interesting for the future, I will take it up in detail from my records and correspondence.

At the same time we were planning for the bridge at Council Bluffs, Mr. Chanute was building a bridge across the Missouri River at Kansas City and endeavoring to use piles as a foundation, and Mr. James B. Eads was building one across the Mississippi River at St. Louis on the same plan, and the Northern Mo. Railroad was building a bridge at St. Charles across the Missouri River and the C.B.&Q.R.R. a bridge across the Mississippi River at Quincy. Mr. Jesse L. Williams, the Government Director who was giving a good deal of attention to the bridge question wrote me that he had spent two days at Kansas City, then at St. Louis and four days at St. Charles and a day at Quincy and

*Brill*

advised me to have someone go to Kansas City and Quincy in October, after the river had fallen and some of the foundations were in, thinking we could get the benefit of all their experience and that it would be of value and that being a year behind these people we could obtain their outfits at about one-half price. Mr. Chanute had expended \$40,000 for his outfit, including \$10,000 for a steamboat. At Quincy the cost of the outfit was much larger.

They were having great difficulty at Kansas City and St. Louis on the deep scourings of the river..

In September, 1867, the Company let the building of the bridge across the Missouri River, on my plans, to Mr. L. B. Boomer of Chicago. This contract to Boomer was let before the location was permanently settled and was for some purpose that I did not understand, because Boomer certainly could not put any price on a bridge when we had not decided whether it would be a high bridge or a low bridge.

My plans were so radically different from any that had been used in the United States or abroad, that they were attacked by nearly everyone and it was a long time before I could bring Mr. Williams and others to consider them, but I was very industrious investigating the question, writing engineers who had had experience with air and fortifying myself to defend the plans when the question came up for final decision.

On December 20, 1867, Mr. H. L. McComb, Chairman of the Committee of Missouri River Bridge, passed a resolution before the Board instructing the chief engineer to ascertain and report as early as practical the cost to the company of the right of way to connect with the present road of the company together with such amount of land as in his judgment would be required for the use of the company for terminals upon Child's Mill crossing, and also the M. & M. Crossing to Omaha. This evidently had fastened the location down to those two lines, and on December 23rd, I put two parties under charge of Mr. House, one at the Child's Mill crossing and the other at the M. & M. crossing to make borings during the winter.

The work on the bridge across the Missouri River at St. Charles was suspended, the Missouri Railroad company lacking the funds to build it, as they stated, but as I learned, they suspended work because they had become satisfied that one of the foundations of piles which they had built had been undermined by the river. The B. & M. who were planning to build across the State of Iowa, were threatening to build a bridge at

Bellevue and I learned that they had changed their plans to build a bridge at Nebraska City on their branch and connect with Omaha over our branch through the St. Joe and Council Bluffs road which they owned.

On January 10, 1868, Mr. Benjamin H. Latrobe, a very noted engineer of Baltimore, whom the company had appealed to about iron columns for the foundation of the bridge, wrote that the column form of piers would not be suitable to the Missouri River on account of its rapid current and its gorges of ice and islands of drift wood which nothing short of a solid mass of masonry, properly protected by iron sheeting would effectively resist.

In answer to the resolution of the Board of Directors forwarded by Mr. McComb on January 27th, I wrote them as follows:

Washington, Jan. 27, 1868.

"I have the honor to report in accordance with the resolution of the Board that Omaha, by vote of the council and guarantee of its citizens said to be legal, have guaranteed donations of ten acres of ground and right of way to build track and to our shops and depot grounds, on east side of river on M. & M. line. No right of way has yet been obtained. Right of way over Child's Mill line has been obtained by guarantee and by deed and bond, from our grades and intersections of road in Mud Creek Valley. I have deeds for right of way over all this line except two or three pieces belonging to non-residents. I have examined the estimate of Mr. Williams and am convinced that they are very carefully made and will cover all cost of bridge and approaches at Child's Mill and M. & M. crossing for the length of bridge he estimates for. The recent surveys and soundings having determined that rock bottom is only 42 ft. below low water at Child's Mill, together with the finding of a quarry within a short distance will materially lessen the estimate at Child's Mill. We find rock at M. & M. crossing 80 to 90 ft. below low water down to which iron tubes or piles must go, this will increase somewhat the estimate at that point.

It is alleged that the Missouri river operates detrimentally on cast iron and that the parts of steamers lately raised show that cast iron 11 years in water has corroded one-quarter of an inch.

Messrs. Latrobe and Smith on account of this fact have abandoned the pneumatic piles and adopted a hydraulic pile, which, to my mind, has great merits and could be economically used especially at Child's Mill crossing.

I call the attention of the committee to the letter of J. L. Smith setting forth a plan of building the bridge and completing it within one year. The estimates that have been made on several plans make cost of bridge at Childs Mill generally from \$600,000 to \$700,000, and at M. & M. crossing from one million to one million two hundred thousand dollars, so that for any bridge you may determine to build you may calculate that it will cost you twice as much at M. & M. crossing than at Child's Mill and that it will take you twice as long at M. & M. crossing as it will at Chils Mill. The estimates of different spans so as to equalize the cost of span and piers show that the most economical lengths are as follows. When piers cost up to \$26,000 each, 200 feet for span is most economical; when piers cost from \$26,000 to \$35,000, 250 feet span is most economical; when piers cost up to or above \$50,000, 300 ft. span is most economical, so that on our present estimate 300 feet span is the one we should adopt.

I have had a large number of estimates made on 250 and 300 ft. spans with piers and built of masonry and iron piles; also hydraulic piles, also with iron and hydraulic piles and 35 to 40 ft. masonry; then iron columns to seat of bridge; also all iron columns for foundation to seat of bridge, and we can have the benefit of these estimates to guide us in selection when the plan of bridges comes under consideration. I have also been to see some of the ablest bridge engineers in the United States and

consulted all the leading engineers of the United States army, those who have been mostly engaged in works requiring difficult foundations, military railroads, &c. I laid before them our maps, profiles, soundings &c. and without exception they all gave their opinion that there is but one point to bridge the river in an engineering point of view and that is at Child's Mill crossing. They look upon the M. & M. crossing with its 92 ft. soundings, shifting river and great length of bridge as a formidable undertaking. I am convinced that we can build the bridge at Child's Mill this year if we commence work immediately.

I have parties at work on pier and lines at both points making accurate and detailed soundings for each pier; also have been running our location of portion of the line. The additional maps, profiles &c. are submitted with this."

Mr. William McAlpine whom I had written to in relation to the bridge wrote me that if we had rock bottom he would recommend stone piers, but if we had no rock bottom, and were depending upon piles, he was then inclined to the opinion that the large iron columns, eight feet in diameter, two to a pier, according to my plans, filled with masonry, sunk by the pneumatic process were feasible, but he still preferred the stone piers sunk on an inverted caisson. This was to be sunk by the weight of the stone and the pneumatic process.

On January 28, 1868, Mr. House reported that rock had been found in all but three holes at Child's Mill on piers 5 and 6. It was at a depth of 75 feet, but on pier #1 not more than eight or ten feet deep. The rock falls off uniformly west to East. Sometimes a stratum of clay is so hard that it is impossible to penetrate the first time trying. No sudden offsets in the rock have been found, nor logs. On the M. & M. crossing they had only been able to get down 80 feet and could not find rock at that depth but the bottom seemed as firm as rock and there was no penetrating it.

<sup>1868</sup>  
On February 1st Mr. House wrote that on the Omaha crossing on pier #3 he struck rock 82 ft. below the surface of the water, 79 feet of the distance was sand--water three feet deep. On Pier #3 at Child's Mill rock was found at 32 to 48 feet, the water averaging ten feet deep. The soundings are taken in squares of twenty-five feet.

On February 11th, 1868 I instructed Mr. House to make soundings at Bellevue on the B. & M. railroad, high bridge crossing and to connect and tie up his lines at the mouth of the Mosquito coming to Council Bluffs on the East and to connect with our line in Mud Creek Valley so as to give a comparison between the C. B. & Q. line, the Child's Mill line and the M. & M. Omaha line.

On February 18, 1868 I wrote to Mr. H. S. McComb, chairman of the Bridge Committee, the following letter giving the comparisons of our line with the B. & M.:

Washington: Feb. 18, 1868.

"The report of the engineer of the Burlington & Missouri River railroad company having been referred to me for examination and report, I have the honor to submit the comparative estimate and the following suggestions: -

First, a fair comparison for competing roads approaching from the east must be a common point on the east side of the Missouri River, as all freight will be landed on east side of the Missouri River by the Union Pacific Railroad at a common depot. To reach this point the Union Pacific must build by Child's Mill line 6.24 miles of new track, to Union Pacific Railroad transfer grounds and by Bellevue line to transfer grounds at Trader's Point 8 miles of new track.

Second, the Northwestern Railroad, the Chicago, Rock Island & Pacific, the Council Bluffs & St. Joe Railroads by their charters and agreements are bound to concentrate or build their roads to Council Bluffs, Iowa, and our comparison is therefore brought down to the point whether the Chicago & North-western railroad, and the Chicago & Rock Island Railroad shall build their line and make their transfer at Trader's Point, making 5 additional miles of distance to be added to their distance from Chicago; or whether the Burlington & Missouri River Railroad shall build the 5 miles, and add that to their distance from Chicago. The Burlington & Missouri River railroad now own or control the Council Bluffs & St. Joe railroad to Council Bluffs, and no doubt will run that track from the point they strike the Missouri River Valley to Council Bluffs or Trader's Point.

We may also assume that a bridge at Bellevue must cross at or near the point adopted by our surveys, and in surveys of Mr. Teilson and Mr. Doan, and the only grounds that can be used by the companies for transfer grounds on east side of the Missouri River is the Platner farm or Trader's Point. These grounds are 5 miles south from the Union Pacific railroad transfer ground near Council Bluffs therefore using each of these points the comparison to a common point in the Pappillion Valley would be via Trader's Point to Point "S" in Pappillion Valley by Mr. Doan's line as follows:

Burlington & Missouri Railroad	8 miles.
Chicago & Northwestern railroad	13 miles.
Chicago & Rock Island railroad	13 miles.
Council Bluffs & St. Joe railroad	8 miles.
With five miles of branch to Council Bluffs.	

Second:- Using the Union Pacific Railroad Company's transfer grounds, at the initial point "A" in Pappillion Valley by way of Child's Mill, crossing Union Pacific railroad surveys as follows:

Chicago & Rock Island Railroad,	11.16 miles.
Chicago & North-western railroad	11.16 miles.
Council Bluffs & St. Joe Railroad	11.16 miles.
Burlington & Missouri River railroad	15.16 miles.

Or if the Burlington & Missouri River railroad should build their road by Bellevue to the point "A" in Pappillion Valley, they would only save seven miles over the line by Union Pacific Railroad transfer grounds and Child's Mill crossing and our present line to point "A" in Pappillion Valley, and would have to maintain branch five miles long to obtain the local trade of Council Bluffs and Omaha.

The proposed Trader's Point transfer grounds on St. Joseph Railroad, the initial point of Mr. Doan's surveys- are barely above high water; the country in all directions surrounding them is overflowed at every high water so that it is a perfect sea of water from the lower Council Bluffs steamboat landing to Pacific City, the overflow extending east and west from bluff to bluff. These grounds are today threatened by the near approach of the river, it having in the eight years worked south and east over one mile, and the Council Bluffs & St. Joe Railroad must for future security move their entire line from opposite the Council Bluffs lower landing to Pacific City two miles east. Last year this road was unable to run for nearly three months on account of the damage to it by high water caused by rise of the Missouri River. In addition to the overflow of the Missouri River, the lines and grounds on east side of River opposite Bellevue are subject

at all times of the year to overflow by the waters of Mosquito Creek, a stream running diagonally through the low bottoms, and that often in heavy rains overflows its banks, while the transfer grounds near Council Bluffs of Union Pacific Company are surrounded on all sides by a prairie above high water, with all approaches to it from the east and west by railroad or wagon road above the highest overflow and is threatened in no direction by encroachments of River or Creek.

In submitting the estimates for this line, I have been controlled in prices, material and work by the estimates of Mr. Williams, as per his report. I have cut down materially the masonry estimated by Mr. Doan. He estimates for part wooden truss, we for all iron truss; he estimates all pile foundations, we two foundations of iron piles, &c. Our quantities agree with his, also length of bridge, and I take his quantities for the approaches east and west so that for some kind of structure our estimates would not materially differ from his."

*With*  
Mr. Joy who was at the head of the B. & M. R. R. at that time was very persistent with the Boston people endeavoring to combine with us and bridge at Bellevue instead of at Omaha. This I was very much opposed to as I considered that it changed our whole plan of transfer, bridge, etc. and made the Union Pacific line a secondary affair; however, he seemed to have obtained a very strong hold on the Boston people.

On February 12th, 1868, Mr. Chanute wrote me from Kansas City as follows:

"The narrowest point we can find in the river at medium stage is about 700 feet between banks, and it is 1300 at the point we propose for the location of our bridge, which will be about 1400 feet long. I send you a rough map, which will serve to give you an idea of the location; the red showing our contemplated lines. Crossing just below the great bend of the river, and about 1 1-2 miles below the mouth of the Kansas, we are compelled to approach the bridge through a bluff of earth about 90 feet high, with an 8° curve, and to cross the river at an angle of 7<sup>20'</sup> with the current. As the current hugs the south or Kansas City shore, our first span cannot be much more than 100 feet. Next we propose a draw 360 feet long, then 2 spans 250 feet each, which brings us upon the sand bar, and 2 spans of 150 feet each take us to the bank. We shall require in addition about 1-2 mile of trestle work to pass flood waters.

We find an extreme distance of 36 feet between high water of 1844 and low water of 1860, and the north shore being a bottom 3 miles wide, a "high bridge" is quite out of the question. The conditions of a low bridge are fixed by the act of Congress making ours a post route viz: "Draws 160 feet span in clear and the adjacent span 250 feet each; the bottom chord to be 10 feet above the highest water mark (the extreme variation at St. Louis between high and low water is 41 feet 4 3-4 inches; at Quincy, it is 20 feet and at Burlington 19 ft.) It so happens that we can save very little money if any by disregarding the act of Congress, and building upon state charters, and we shall probably comply with them in every particular.

2nd. The bluff on the Kansas City side is composed of rock towards the bottom, and this rock which is nearly bare near the shore, say 15 feet below low water, stretches quite across the river, dipping however so that on the other shore it is about 80 feet under low water and overlaid with sand. We shall go to the rock with all the piers exposed to the full wash of the current, the deepest being about 38 ft. below low water, and the water 24 feet deep.

3rd. The cost of the entire structure will be about \$500,000 for a R. R. bridge alone; should a wagon bridge be added, as has been proposed, it will be about \$700,000.

4th. (Our ordinary piers will be 7 feet wide on top, with a batter for of 3-4 inch per foot on each side; the piers at the end of the draw will be 8 feet wide, and the draw pier 30 feet in diameter.

5th. We have not fully decided upon the superstructures, but will probably erect a Howe wooden truss; iron is now too dear. I send this information for your own exclusive use, and have hitherto refused to give it to the newspapers or to the citizens of the place as all our plans are not yet perfected.

The bridge at St. Charles is to consist of 4 spans of Ferick's iron suspension truss with wooden top chord, 325 feet spans with a draw 214 feet long or 200 feet in clear, to slide up and down vertically upon guides and to lift up 107 feet. Ours will be a pivot draw. We have no doubts of our ability to confine the river permanently to its present channel; the peculiar location selected, just below the great bend of the river, enabling us to do so by suitably shaping the one shore against which the whole force of the upper river impinges.

I can perhaps give you other information about strength and cost of superstructure, method of putting down foundations &c. &c. when you have your plans further matured, and should be very happy to meet you at any time and tell you the little we know. You may find a short trip here, after the river opens, and we begin operations, more satisfactory than correspondence, and if you will drop me a note a few days before hand, I shall make it a point to meet you.

Hoping to have been of some slight use, and not to have tired you with this long letter, I remain."

After getting all the data, the Bridge Committee decided upon the Child's Mill location for the bridge. This was a preliminary decision and had not received the sanction of the Board. Mr. Ames wrote me a letter asking me to write Mr. J. M. Glidden of Boston, one of our directors, in relation to this decision. From an engineering point of view, there was no question as to the Child's Mill line being the best line, but from a commercial point of view I had my doubts because it made a round about way to get through Omaha, though it was in line with the decision of the Government as to the route which should be taken to Omaha to reach our line at Mud Creek Valley on a thirty foot grade. My letter to Mr. Glidden was as follows:

Washington, Feb. 16, 1868.

"At the request of Mr. Oakes Ames, I write you on the bridge question. The Bridge Com. have rightly and justly decided upon Child's Mill Route; this suits the views of the N.W.R.R. the C. & R. I. R. R. and puts them both on best, shortest and cheapest connection with the Union Pacific Railroad, but does not suit the views and interests of the C. B. & St. Joe R.R. They sent out an engineer from Boston who was given two weeks from Boston to return with a report upon which they ask our company to ignore facts established by several of the engineers who have spent two or three years in a critical examination of the whole question. Now it narrows down to the question, Shall we locate our bridge to make the N.W.R.R. increase their distance from 5 to 7 miles and the U.P.R.R. increase their distance five miles to benefit the St. Joe and the B. & M. Railroads, and give that road the advantage over the other two by placing our bridge at a far more difficult point for bridging the river with eastern approach, on ground threatened by the Missouri River and under high water?

To my mind there is no question as to the justness and right of the decision of the Committee. Mr. Williams, one of the Government Directors, who gave this question a careful examination and reported upon it, and I believe no one who has carefully examined the matter doubts the point to cross the river, in an engineering point of view, and, as now presented, the true policy for our company. You can answer whether we shall go out of our way, ignore the action of the committee who have given the question long and careful study for the purpose, and no other, to benefit

the B. & M. River R. R. to the detriment of all other roads now built to us, or to be built to us from the east or north? I take it for granted that the southern trade will mostly leave our road at or near Kearney and go by the Atchison Branch which will be finished this year, as their bill for a subsidy will no doubt pass soon. The trade of the H. and St. Joe will go over the Atchison Branch. In fact, every thing south of the Platte route will reach us at Kearney, as by doing so they would save 40 miles in distance over coming to Omaha ~~or~~ Bellevue to connect with us. While every road connecting with us north of Platte even to the Dubuque and Sioux City will for a long time make direct connections with us at this bridge and under the protest of the roads, shall we stullify ourselves in our action with all the argumentation in favor of the action of the committee. I trust not!

I enclose a copy of my report made to the committee at its last session on some of the questions raised by the B. & M. River R. R. I understand that they represent it as being only two or three miles additional distance on estimated lines from N.W. & C. R. I. P. R. R. to cross at Bellevue. I assent without fear of ~~success~~ful contradiction that it makes 5 to 8 miles distance to each of these roads, while it only adds some 6 or 7 to the B. & M. to cross at Child's Mill, as they now have a road built to our transfer grounds. The surveys made by my order since meeting of the committee proves conclusively the accuracy of my comparisons, they also show that we must count on Trader's Point as transfer grounds. It seems to me to be a very humiliating position to place your company, that after so much and close examination of the bridge question, that a two or three days survey should discover such extraordinary advantages that we who have covered the same ground a hundred times in our examinations and surveys should not be able to discern.

I have no fear of the result if your board examine the matter fully and carefully and do not allow personal or private interests so persistently put forth by the B. & M. R. R. to control in the ~~base~~ of Mr. Ames requests that you show this letter and report to Mr. Bates, Lombard and others interested in the matter, he also says the new route being built to us from St. Louis object to crossing at Bellevue; they want to go to Bluffs and Omaha for that ~~crossing~~ without having to maintain a six miles branch."

One of the criticisms against the bridge columns was that of expansion; another, that there was no foundation in the sand to rest the bottom of the column upon.

I sent these criticisms to Mr. J. McAlpine, who was an authority in relation to these matters and he wrote me as follows:

Stockbridge, February 20, 1868.

"If the bridge seat should be an inch higher in summer than in winter, I can see no objection. Where the iron braces are introduced between the columns, their sloping length is more than the vertical length but in such short beams this difference in their expansion is inappreciable, even less than it would be on the members of the trusses above.

In regard to filling the columns with masonry and resting the bridge thereon, instead of upon the iron rim, I may remark that the adhesion between the masonry and interior surface of the iron and the projection of its flanges would result in bringing any weight which might be placed upon the filling (of whatever material) upon the shell within a distance of ten or fifteen feet below the top. The English practice both plans but I am perfectly clear that the true method is to rest the superstructure directly upon the rim of the columns, that is, upon a properly prepared cornice, on which the cross bearing beams will rest and to which they will be bolted."

The decision of the Bridge Committee to locate the bridge at Child's Mill created a great disturbance at Omaha and Council Bluffs and on February 21st, Mr. H. M. Hoxie wrote me the following letter in relation to this decisions:

Omaha, February 21, 1868

"Messrs. Millard & Kountze start in the morning for New York as a committee to represent the citizens of Omaha before the "Bridge Committee." Of course, it is needless for me to say a word about them or their mission to you, but as a prospective citizen of this city and state, I want to explain one or two matters.

1st. In regard to the lands voted by Omaha to the N.W.Ry.; the amount remaining due, &c. The Mayor has again issued a proclamation to the voters calling an election to vote on the question of the issue of another \$60,000 to pay the \$75,000 due the N.W.Ry., and I am assured that it will carry. The responsible citizens of Omaha pledged themselves that it shall be paid, and I firmly believe it will.

2nd. Location of bridge--You are aware that I was always against the telegraph crossing as I think that would be a failure as a bridge. A high bridge is my idea, and train crossing my choice, Why? because it would accomodate four roads. It would build up two towns, Council Bluffs and Omaha; would not divide and distract the people; would not make six small towns, but two large cities; is central for all roads from the East and common to all. Giving neither R.R. a large advantage over the other; would concentrate all the business at the eastern terminal station of our road and not make three terminal stations for us and therefore three sets of men--keeps the whole business under the eye of one man and his assistants.

The people of Omaha appeal to that Committee and to you in a spirit of fairness that this should be done. They appeal to your magnanimity and good fellowship.

The reason why I write this is that the citizens of Council Bluffs and Omaha are at present very much alarmed and dont know where to look for help, but to you, and I have been asked to write. I am done."

Mr. H. J. McComb said in his letter to me:

"I shall do what I can to carry out what is the clearly defined duty of the Union Pacific Railroad company - to wit: cross at Child's Mill. It is the point fixed by the God of the Universe, and must be recognized- in its full acceptation by his creatures, and so bridge it." *Nate*

At the meeting of the Board of Directors of the Union Pacific on the bridge question, the fight fell between Child's Mill and Bellevue. Mr. Joy, the Council Bluffs and St. Jo and the B. & M. interests were very favorable to Bellevue and came very near carrying their point. They proved on paper that they had good transfer grounds on the East side of the river near the Platner Farm. I succeeded in halting the action of the Board upon this question until I could verify their reports. I was satisfied that they were not correct but I did not then have the data. I immediately wired to Mr. House to make a thorough examination on the Bellevue line and the grounds on the East side of the Missouri River. The B & M cut right across the country from their branch, and had three long tunnels, 2900 feet in all. By this method they established a shorter line than the Child's Mill line.

On March 9th, 1868, I received the following letter from Mr. Oliver Ames showing the inclination of the company:

Boston, Mass.

"Your favor of the 5th inst. is received. The bridge question is greatly distressing the Omaha people, and they are doing every possible thing to fix the location at Omaha. The speech of Joy before the Committee was very clear on the Omaha question, and I see no way to fix the bridge at that locality but for them to put through a track on the Dey line; that will be as easy grades as we now have. The shorter distance would enable us to put on engines to help trains over the first grade. I proposed to the Omaha committee that if they would put through the Dey line, cutting it down to say a 40 ft. maximum grade, I would do what I could to favor their line and I think the whole Committee would take the same view. There is no question but what Omaha would be damaged double the cost of a satisfactory line on the original Dey line."

I had sent my specifications for the iron piers to Mr. McAlpin to criticse. In returning them with his criticisms he says:

"I sent the drawing of the stone pier resting on iron piles in case you should feel any preference for that arrangement, and will say that the cost will only be a little greater than by the other plan. At the same time, however, I wish to repeat in regard to the stailing, that I like the one constructed in wood and protected in iron, owing to the superior elasticity of the frame and the ease with which it can be wholly or in part replaced."

I had engaged Mr. George Wolcott, who had been on the Quincy Bridge, to take charge of the work at Omaha and on March 19, 1868, he wrote me saying:

The plan of iron columns extending from foundation to Bridge seat is something entirely new to me, and consequently do not feel myself competent to judge of their merits. I would think, however, that two columns 8 1-2 ft. in diameter would make too light a structure for the support of so important a bridge as this; the greatest danger being as in all cases from heavy gorges, as has lately been experienced at Rock Island and Davenport. I may under-estimate the strength of piers built in that way, but it seems to me as though it would be very liable to be swept away by a heavy gorge."

On March 25th, 1868, I received the following dispatch from Mr. J. T. Baldwin:

"Bridge will be located at Telegraph or Bellevue tomorrow unless we give \$200,000."

This referred to the donation demanded from Council Bluffs and Pottawattamie County.

On March 25, 1868, the Board met and I presented the maps and new investigations I had made and thoroughly refuted the position taken by Mr. Joy and Mr. Doane on behalf of the Council Bluffs & St. Joe and B & M road.

*Nat'l*  
There was a long discussion between the Child's Mill and M. & M. crossing. While the Child's Mill crossing was the best ~~from~~ <sup>south of</sup> an engineering point of view, all things considered, I felt that the crossing should be made at the M. & M. crossing at Omaha and so stated to the Board, showing the difference in cost and the advantages. I recommended

this especially if the company carried out the demand of the government that the line should go from Omaha down the valley of the Missouri to Child's Mill and cut through on the Child's Mill line to the Muddy Creek. This would give a thirty-five foot grade out of Omaha to Muddy Creek in place of the 66 ft. just West of Omaha, and accommodates Council Bluffs and Omaha.

The Omaha and Council Bluffs people were there in force. The Company finally adopted the M. & M. crossing, known as the South Omaha crossing, Omaha to donate the depot grounds and right of way and give \$250,000 either in city or county bonds; Council Bluffs was to give a quarter section of land on the East side of the River and the right of way, and also agreed to erect a depot building and to give \$200,000 in city or county bonds. The bridge was to be built on the plans presented and adopted by me, <sup>for</sup> a high bridge, resting on iron columns from foundation to bridge seat.

Government Director Jesse L. Williams who sustained me very strongly in all the recommendations I had made wrote me as follows:

Ft. Wayne, March 28, 1868.

"Much depends upon the organization for building the bridge. Although the U.P. Company will keep a majority of the stock, yet I do hope there will be a separate management from the building the railroad. My only reason for this is that if built by our company the Vice President will control chiefly and he will make a flimsy job of it; always endeavoring to control the plans which would drive from it every competent engineer. If he could have his own way no engineer not entirely subservient and who would make estimates to order would stay in his employ. This would not do for the bridge, nor will it answer for his penny-wise and pound-foolish economy to be introduced on the bridge. Why will not Mr. Dillon and Duff, Ames and others see this? Why will they not act in the same liberal policy that governs Mr. Joy at Quincy, Burlington and Kansas city? There they give the control of the engineering and of the purse to such engineers as Colburn, Hivetsburg, Clark and Chanute-telling them to build a substantial bridge as cheaply as they can. They should do the same at Omaha. Such I am sure would be the policy of the U.P., the North Western & Rock Island but for Durant.

I hope you will go to New York at the right time and try to shape this thing up. It is very important. Lombard and perhaps Bushnell are in for a speculation on this bridge as well as the Vice President.

Col. Seymour's report, which I enclose, is a curiesity. perhaps I was a little rude to him. I could not forbear rising immediately on his finishing the reading and asking whether he did not know that just where he recommended the low bridge, the east bank had worked away 500 to 700 feet in three months. As to dredging, I told the Board that they might work two dredges for two days in the draw, at certain stages of the river, and one day afterward there would not be a hole big enough to bury the bridge committee in. Duff, McComb, Cisco, Macy and others declared immediately against any low bridge. The whole report is full of fallacy, and if he had any influence in the building of the bridge it would be necessary to expose him, and break that influence."

The question of confining the river was a very important one and Mr. Williams had given it a good deal of study and on April 7th wrote me as following in relation to it:

Fort Wayne, April 7, 1868.

"The theory which I have adopted for the probable future of the current at Omaha is this: that the great westerly bend at the Saratoga table must continue for many years, and work in nearer to the bluff. Then, if the hard point at and above the Telegraph Pole shall remain, as it probably will, being on rock, the current thence must continue in a south-easterly direction, undermining the East bank at and above the shops and thence, making a bend, will bear against the westerly bank at or near the M. & M. crossing. It was this action and reaction that cut out the west bank last summer. While I am fully aware of the uncertainty of all speculations as to the course of this river, yet I think some such programme is reasonable. Look at it.

Now, if this theory should be found nearly correct, then it must soon wear in to the point where I thought of placing west abutment. But, until it shall wear in westward, the west span will pass but little water. Heretofore the river has been quite straight from Telegraph Pole to the quarry; but now it inclines to become serpentine washing first east bank and then farther down the west bank. It may be that the wash eastward will continue, and, taking a larger sweep, might hereafter abriad the railroad line east of the proposed east abutment. In that case we should have to try our hand at rip-rapping in a north-easterly direction from the proposed abutment pier, which though not so light a job as Mr. Joy represents, might be practicable with plenty of money.

You may perhaps doubt the safety of my proposed dyke on the sand bar; but would a trestle bridge be any safer, even if on piles? The dyke could only be moved by the channel encroaching and undermining it, but the same cause would undermine the trestle bridge no matter how deep the piles were. The dyke, by lessening the height of the treatle, would make that much safer-while it is so much done toward a permanent embankment will apply to the embankment on the west side.

A bridge at this site cannot be very short. It must necessarily pass between the abutments-nearly the whole river. With the Council Bluffs roadway and the thick willows on the east side, and the street embankments at Omaha on the low bottom, no great amount of flood can be passed on either side out of the channel; but whether it should be 2,000, 2250 or 2500 ft. long can better be determined after the measurements of flood section which I have suggested. The longer the safer."

The curb for pier #4 on the Kansas City Bridge was lost and on April 7, 1868, Mr. Chanute wrote in relation to it as follows:

Kansas City, Missouri.

"I hasten to give you an account of the wreck of our curb No. 4 which, you may remember, we expected to put down 32 ft. below low water and drive piles to the rock.

The washing away of the shore above the bridge line last summer has materially altered the current lines at high or medium water, although they remain about the same at low water. We find that the direction of the vein of strongest current, after impact against a shore, is in function of the velocity, so that the angle varies with the stage of water, and as a necessary consequence the point of impact varies also being governed by the upper bend. The velocity is goverened not by absolute height of the river above its low water, but by the height of the flood wave coming down, so that we find greater speed from a sudden freshet on a low river than from the greatest ~~sudden~~ flood from the mountains.

We had put a curb No. 4 down about 16 ft. through the sand, when a sudden flood from the heavy rain in the beginning of March came upon us. The low water current lines were about as dotted, as the water rose they changed as shown. The current vein in vibrating from the shore scoured on one side of the curb to the depth of about 25 ft. while it did not cut at all on the other side, which was in slack water. The weight of the sand on the side which had not scoured pushed the curb over, while the scour under its edge allowed it to settle towards the current side, and in the process it first bowed in the center and then broke to pieces; so much so at least that it is cheaper to build a new curb than to try to repair and use the old one which is canted over and in fragments.

The conclusions which we have drawn from the mishap are: 1st., that Mr. McAlpine is probably correct in his estimate of the danger of unequal settling of a pile foundation not driven to a resisting stratum in a river subject to scour, and 2nd, that any pier in the Missouri should have enough mass or weight in proportion to its surface to hold the thrust of a bank of sand saturated with water, 25 or 30 feet high.

I am contemplating a plan for this foundation of building the pier first and putting in the foundation afterwards; that is to say, to make the outer shell of the pier the curb, sink it by dredging inside and water jets outside, building on top as fast as it goes down and filling the inside with concrete and backing after the rock is reached."

The loss of this pier was of great benefit to me in convincing our people that my plan for the iron piers was really the best for handling the quick-sand of the Missouri River at a reasonable cost.

<sup>1864</sup>  
On April 13th, Mr. Williams wrote me enclosing a copy of Mr. Chanute's currents and misfortunes. He said it would be found suggestive.

"His 25 ft. scour on the side of a pier and nothing on the other is a thing to be thought of. The plan of two iron columns 8 or 9 ft. apart would have the advantage of allowing the sand and rip rap to equalize somewhat and thus in part avoid the pressure which overturned his caisson, but how would such a current at such an angle operate upon a draw pier nearly 400 ft. long? It would require I think a better foundation than some of our friends imagine."

This was a hit at Seymour's low bridge at the Telegraph Pole line.

<sup>1868</sup>  
On April 13th, I advertised for proposals to build the bridge over the Missouri River on plans and specifications prepared by me.

Mr. J. L. Williams had been in correspondence with Mr. O. Chanute in relation to his trouble and endeavoring to get his opinion on my location and plans of the bridge at Omaha, and on April 26, 1868, Mr. Chanute wrote Mr. Williams as follows:-

Kansas City, Missouri.

"Yours of 13th and 14th raise so many questions of interest, that I allowed them to remain unanswered until I had leisure to notice all the points you make.

With regard to our own work, we propose to shift the spans as you suggest, but not to use columns as we can go down to rock quicker and cheaper with the plan we propose and secure much greater stability. As to the bridge at Omaha, concerning which you ask my opinion, I fear that it will have but little value, without a personal study and examination, but I give you the impressions derived from your map and report for what they are worth.

1st. Location - It seems to me that the most expensive and troublesome site has been selected. Being on a straight reach of the river it may be necessary to protect both shores for miles in order to secure the channel within its present banks. A bridge on the Missouri should always be located near the tangent point of the second pair of reverse curves or at the head of a straight reach, and there should, if possible, be a rocky shore on the concave bank, as the tendency is to scour the

concave and fill up the curve side. The protecting one bank then holds both, and shallow foundations on piles become safe on the curve bank.

2d. Length of bridge. I should doubt the propriety of cutting off the flood overflow, and in that case would put all the foundations down still deeper, as the bed will scour. A good rule would be that the flood discharge and cross section being known, the obstructions caused by embankments and piers should not raise the surface of the river, so as to give it more than velocity of 12 feet per second through the bridge in floods. This will scour rocks, and be difficult for steamboats to stem (8 miles per hour.)

3d. Rip rap will stand in the Missouri, but will require constant and timely repairs. The bulk of the stones thrown around pier No. 3 have been carried 70 feet down stream. As soon as they get a good footing against the bar formed by the eddy behind the pier, but little more wear will take place. Curb No. 4 would have been safe against the flood we had if it had been completed as proposed, but a succession of floods without renewal of rip rap washed away would have destroyed it.

4th. Plans. I am very glad that pneumatic columns are to be adopted, as it will furnish a fair comparison of cost with the method we have adopted and time employed. We need besides a good set of air machinery in this country, and yours should be of the best. I hope that Mr. McAlpine will be selected to carry it out. As to the particular dimensions you mention, I fear they are too light, althought this is with me a matter of judgment and not of experience. 1st. I fear a shell 1 1-4 inches thick (filled with concrete) would broken by a blow from a steamer or a raft of drift. Parts exposed to shocks are generally made 2 1-2 inches thick in Europe. 2nd. The ice breaker columns should be put down as deep as the others, otherwise they may scour out and pull the pier over. I should say you ought to go down 65 or 70 feet below low water.

5th. Are columns 8 1-2 feet in diameter stable enough? In case of scour on one side very little material will flow between the columns, as it will arch itself on the tangents to the lines of adhesion of the sand as shown in plan, and it seems quite clear that the small columns under the ice breaker will be pushed over by a scour of 20 feet on one side. Take the tube of 3 1-2 ft. in diameter, call the angle of repose 15° and weight of 1 cubic foot saturated sand 120 lbs. The thrust would be  $30 \times 0.538 \times 3.5 \times 120$  lbs---111 tons. Weight on base, "X"0000. Weight on shell---11x60x12x450 lbs. x 10 p.c. 17 tons, -12x2000. Concrete, 9.62x60x133 lbs. 38 tons, 2000. Ice-breaker, say this proportion - 10 tons. Considering the columns as a beam these may be calculated as two bent levers of which the moments are exerted on the base, which we will call 6 ft. in diameter. Movement of thrust 111 Tc40 on the edge, 1480 tons, 3 Weight 65Tx3 6 1-2 tons, 30. Movement on case, differences 1.473 1-2 tons. It does not seem possible that the weight of the column of 30 ft. water and the resistance of the soils should hold this thrust and prevent the column from turning upon one edge of its foundation as a pivot, tipping over and dragging the rest of the pier after it.

I have made calculations of stability of 8 1-2 ft. columns in the same rough way, which shows them barely stable under a 30 ft. scour on one side, even with the weight of the bridge on them. I should like to have you send me your calculations of stability in order to compare with more accurate ones I intend to make.

The scour now at pier No. 3 is 33 ft. below low water. I cannot say how much deeper it would go at a pier, as it is down to the rock. The deepest scour in the river bed last year was 30 ft. below low water, but it is much more at a pier.

As this question seems of general interest, I have begun preparing a paper giving a resume of European practice with the air process, which I shall publish probably in the Journal Franklin Institute Super-structure.

Connect your spans over the piers by all means; you will save from 15 to 25 pc. of iron, and with wrought iron there is no objection in tension on the top chord between the points of reversal of strains, and with a high bridge you can roll it into place over the piers without the use of scaffolding.

His criticisms of the workings of the river had not proven true. The straight reach of the river had been maintained, using only dykes

and the West side of the river had been maintained mostly by the slag which comes out of the smelters, and the big bend, where the Telegraph Pole line was, has given us the most trouble, but from there to the south of the bridge, the river has maintained itself mostly in the same channel ever since the bridge was built, but the river has narrowed up very much.

There was a meeting of noted engineers in St. Louis at which the question of the St. Louis bridge, the Kansas City bridge and the Omaha bridge plans were discussed, generally to the detriment of the Omaha bridge. Mr. J. L. Williams who was present at that meeting, wrote me as follows:

Ft. Wayne, May 3, 1868.

"I am satisfied that McAlpin, Parker and Fleming and other able engineers who met at St. Louis and who had never seen the upper Missouri, have an inadequate idea of the treacherous and moveable character of the sand from Kansas City to Sioux City. At either St. Louis or St. Charles, there are no such depth of very light silt, nor such changes in channel, nor is the direction of the current so variant at different stages. On the upper Missouri, except at such a point as Childs Mill, it is impossible to place piers so as to be parallel with the current at all stages. This difficulty we must consider and provide for. The greatest possible depth of column is the surest protection within our reach. It prevents damage from excessive scour, and, of course, adds stability. I have no hesitation in advising 70 feet instead of 60. The drawing you now have shows 64 feet including 5 feet of concrete below the iron. But this will be difficult to get in and likely fail in some case at least, for below the iron tubes you cannot exhaust the water. At Harlem, amongst the clay and boulders and mud, Sickles could go down with sheet piling; but he told me that it might in some cases be very difficult. I would dispense with this expedient and run the columns and concrete to 70 feet, giving the base all the enlargement you can properly.

If I get time I will experiment a little by way of comparison upon a plan like this: Bridge columns 9 1-2 or 10 feet diameter, 70 feet below low water. Ice-breaker to rest on only one 5 ft. columns at upper end, sunk as low as the others - giving 15 feet in the clear to equalize more readily the material. This would require greater strength of ice-breaker bars. We might first place a platform 16 inches timber just under low water and on this lay phoenix beams securing a strong floor and brace between the ice breaker column and bridge column. From the center of sloping ice breaker bars to the upper bridge column at low water place a strong brace at 45° connected with the floor. Would this not be strong enough for any ice drifts in the Missouri?

Think of this. It is very evident that Mr. McAlpin's plan of a single column of 2 or 3 feet diameter at upper end sunk 40 or 50 ft. in the Missouri silt would be liable to topple over like a pipe stem. Even 3 1-2 feet seems unstable in view of Kansas City results. The liability to great inequality of scour on the two sides of the pier resulting from the changing currents is a difficulty I had not fully anticipated. It is wise to foresee every possible contingency and be prepared to meet them. While I would not be driven about by all sorts of views, yet it is prudent to gather and profit by all the experience we can up to the time of commencing work. The Kansas City results are uglier than we expected and much to the point.

We know that iron column piers are not now an untried experiment but we also know that the Missouri River silt is an untried material. At Harlem and in the south I suppose the material to have much more consistency and by no means so liable to changes. So in Europe. I'll venture the opinion that in all European columns, the engineers have found clay, mud gravel, coarse sand or something affording a few greater

resistance to the wash and to the settling of the column than we have in Omaha.

If you have copies, in print, of the specifications of masonry in the Missouri River Bridge, such as you sent me, please send a dozen copies.

I may add that the danger of breakage in the column by driftwood or steamboats does not strike me as imminent. The drift would be turned off by the ice-breaker, and it is only light steamboats that the wind would be likely to drive against the pier."

I sent my final specifications to Mr. Williams, and on May  
1868 9th, from Fort Wayne, he wrote me as follows:

"I received your note enclosing the specifications and inviting my suggestions thereon. I do not think many changes are needed, although I would advise to keep the whole subject open and under your control so long as may be without delaying the work, and in the meantime gather all additional experience. This is more reliable than men's opinions or theories not founded on such experience.

As to the iron superstructure, I have no suggestion to make other than that the upper chords should be of wrought iron. You noticed Mr. Chanute's suggestion of connecting the chords of the various spans so as to increase strength and save iron. I doubt if this is wise. Would not the expansion work a difficulty? Then in case of failure in one span, other spans would be involved.

In regard to the pier columns, I observe that you require them to be sunk 70 feet when rock can be reached at that depth. I would require all to go 70 feet, for if men can live so far down on the rock, they can on the sand, and therefore it is equally practicable. Perhaps the columns at the east abutment and the pier next to it might stop at 60 feet, but this should depend upon the probability of any force of current against the east bank at future time.

The main question remaining, which I think you ought to keep open for further consideration, is the diameter of the columns. If finally deemed best to insure stability, to make them 10 feet, let us enlarge them. My rough estimate of 10 feet for 70 feet deep indicates \$8 or \$10,000 additional cost to each pier, over the 8 1-2 ft. column at 60 ft. deep. What is \$100,000 in the entire cost of the bridge if thereby you insure safety?

As to the bed of concrete 4 feet deep below the iron columns, this is in each case a question of practicability. In some cases it may be practicable, in others not. A very important question bearing upon the safety of the bridge is, in my judgment, the manner of paying for the sinking of the columns. The difficulties and expense at the base 10 or 14 feet might in some cases be very great and I should want the contractors who really will control the work to have no personal interest in stopping the columns too soon. While the superstructure, concrete, and the furnishing the iron columns ready for sinking, the sinking of them, the machinery used therein and the platform(which must rest on piles well secured) on which the machinery is to stand and to which the vertical position of the column depends, should be paid for at its actual cost.

The form of ice-breaker and the number of columns under it should be left open for the present. Is the upper Missouri liable to float very large fields of unbroken ice, like the Mississippi? You probably have observed the facts. Think of this.

Mr. Hjortsberg gave me some results with one of his piers at Burlington, which, however, I would not speak of publicly. He says that a cake or field of unbroken ice perhaps 300 to 1000 feet square struck the pier west of the draw, by working on it, raised the stone of the stalling or ice-breaker and injured the upper end of the pier so that he will have to rebuild it. The masonry was very substantially built and the slope of the nose of the ice-breaker I think about 8 inches base to 1 foot rise. Quiry? What would such a field of ice do to our proposed ice-breaker at Omaha? I also gather from him that there was considerable scour under the ice at Burlington, but nothing else torn out. At Quincy

the ice floods are less formidable, being broken by the Keokuk rapids. Though I have no particulars, yet I believe they lost a good deal in their false works, bridges, &c. Mr. Pope brags much of the ice-breaker at Clinton, which has a slope of 2 base to 1 rise. He says that great cakes of ice strike it, slide upon it, break in two and float on. Mr. Hjortsberg thinks it would be better if our ice-breaker did not quite connect with the bridge column, but stop one or two feet above it so that a shock would not be communicated with all its force to the column. He thinks that there might be a fastening of iron braces or ties between the ice-breaker and the column, which, while it would connect them for all purposes of a brace, would alleviate the shock through its slight elasticity. I do not know that this can be done, but after all, is the ice likely to be so terrible in the Missouri? If it is its great force should only be in the channel. The ice-breaker, if a very strong one is required, is a difficult part to arrange.

Mr. Hjortsberg also made suggestions in reference to rip rap around the piers, which I suppose is based on the results at Burlington. He suggests in the first place that the sand be removed as far down as possible and rip rap placed as low down as can be. This is nothing new to us. The trouble is, how to get the sand away. Then in addition he suggests a wooden crib surrounding our piers sides and end, with a span say 5 or 6 feet on all sides. This crib to be raised up above the water say near to high water, so that we could see when the rip rap began to settle down, then fill the span between with stone. This rip rap would settle down as the sand would get washed from the base. As it settled a vacancy would, of course, be discovered at the top of the crib, which vacancy would immediately be filled with fresh rip rap following down the undermining and ultimately an island of rip rap would be formed insuring safety. This timber crib when decayed would not have to be renewed as by that time the rip rap would have become placed. But this is a bungling and undesirable expedient if we can do without it. Perhaps we had better spend our money in going deep with columns or enlarging them. All this is very sensible but expensive. Rip rap thrown on top of Missouri silt and not held or followed up by more stone will not protect upper end of pier. With the column the main security is great depth.

The piers at Burlington I thought as strong as they could be built. Mr. Hjortsberg's plan was to put above each-disconnected- a wooden ice-breaker on piles to receive the first shock; but this had not been put in. For the Missouri ice none of the piers on that plan are too strong. If the Missouri ice is as heavy we must be careful and build strong."

The question of the penetration of the columns, of the force of resistance of pressure against them, determining what the strength of the column should be, etc. gave me a great deal of anxiety--there were so many different opinions upon them and on this question, on May 2nd, I wrote Mr. McAlpin, (who was the only engineer in this country who had had any experience in this work, he having put in the iron columns across the Harlem river, the only place where they had been used in this country,) as follows:

Union Pacific Railroad Co.,  
Chief Engineer's Office,

Washington, D.C. May 2, 1868.

"I have been figuring some on the penetration of columns and their force of resistance to a pressure against them, should silt on one side of column work out 30 feet deep, and since the disaster to Kansas City Pier and letter I have from Mr. Chanute, I send you some of the ideas presented to me. I have answered them all but I desire to know your opinion on them."

Some say a shell one-quarter or one-half an inch thick filled with concrete should be broken by a blow from a steamer or a raft of drift, parts exposed to shocks are generally made 2 1/2 inches thick in Europe. 2nd. The ice-breaker columns should be put down as deep as the others, otherwise they may scour out and pull the pier over. 4th. I should say you ought to go down 65 or 70 feet below low water. 5th. Are columns 8 1/2 feet in diameter stable enough? In case of scour on one side, very little material will flow between the columns, as it will arch itself on the tangents to the lines of adhesion of the sand as shown in plan, and it seems quite clear that the small columns under the ice breaker will be pushed over by a scour of 60 feet on one side. Take the tube 3 1/2 feet in diameter, call the angle of repose 15° and weight of 1 cubic foot saturated sand, 120 lbs, the thrust would be  $30 \times 0.588 \times 3.5 \times 2 \times 120$  lbs.

$$2 \times 2000 = 111 \text{ tons.}$$

(weight on base)

Weight of shell,  
 $11 \times 60 \times 1 \frac{1}{4} \times 450$  lb + 10% = 17 tons.

$$12 \times 2000$$

Weight of concrete  
 $9.62 \times 60 \times 133$  lb. = 38 tons.

$$2000$$

Weight of icebreaker,  
say this proportion  $\frac{111}{30} = \frac{20}{65}$  tons

considering the columnas a beam, these may be calculated as two bent levers of which the moments are exerted on the base which we will call 6 ft. in diameter On the edge. Moment of thrust =  $111 T \times 40 = 1480$  tons

" " weight =  $\frac{3}{3}$

$$\frac{65T \times 3}{30} = 6\frac{1}{2} "$$

Moments on base-difference  $1.475\frac{1}{2} "$

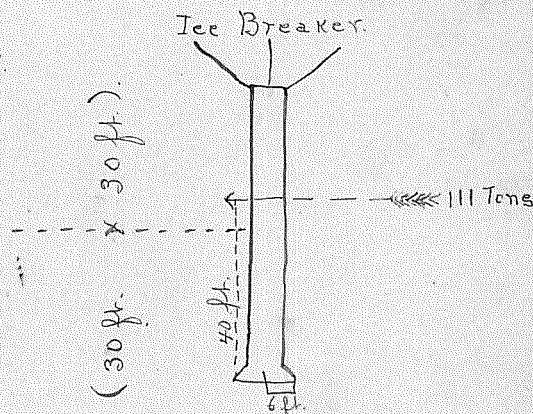
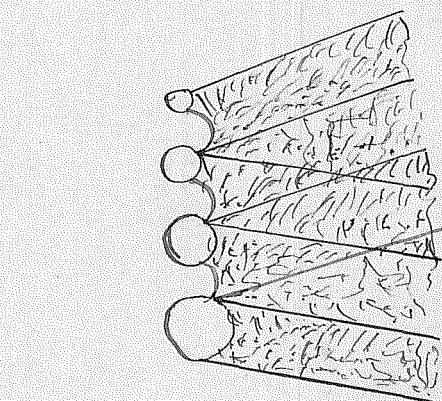
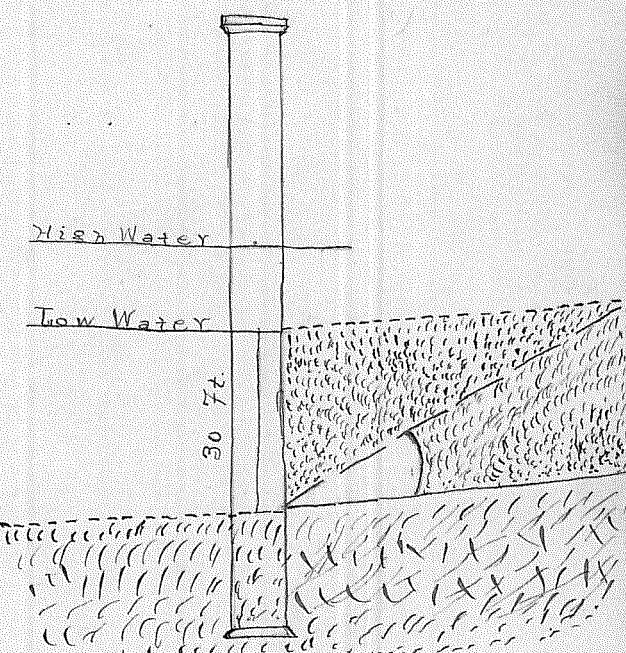
It does not seem possible that the weight of the column of 30 feet water and the resistance of the silt, should hold this thrust and prevent the column from turning upon one edge of its foundation as a pivot, tipping over and dragging the rest of the pier after it.

I have the calculations of stability of 8 1/2 ft. columns in the same rough way, which show them barely stable under a 30 ft. scour on one side, even with the weight of the bridge on them.

I should like to have you send me your calculations of stability in order to compare with more accurate ones I intend to make.

Now what resisting force has the 30 ft. of sand on lower part of column to sustain this immense weight together with the fact that 110 ft. of the column is above the silt with nothing to aid in the resistance of this bulk of sand.

We certainly may expect just such a condition of affairs as this. Chanute writes me thus: "The scour now at Pier No. 3- the Pier that tipped over under just such circumstances as related above, is 35 ft. below low water. I cannot say how much deeper it would go at a pier, at it is down to the rock. The deepest scour in river bed last year was 30 ft. below low water but it is much more at a pier."



Again if we depend upon rip rap to prevent a scour, we are again at fault, as the rip rap at Kansas City moved down stream 70 feet below the pier, it was to protect, and until it forms a heel against the scour on sand that shall enable us to form a permanent island of rip rap around each pier, we have no real security in this. A day may work all this damage.

I notice in reading most of works on European bridges that their up stream portion of columns are made 2 1/2 inches thick; the vertical flanges I put in may add strength. I must admit that every day brings some new obstacle or developement, but so far I have satisfactorily, to myself, solved them, and even in this case I believe I can see the way through. I do not satisfactorily get at the amount of resisting force of the sand, thus:

I make penetration of columns about 11 tons to square foot of surface whereas Chanute at Kansas City says force of ~~the~~ against his pier was 348 tons thrust, while resistance of pier was weight 1077 tons exerting a force upon the mortar bed of 549 tons, hence the Resistance of pier was 549 tons.

Adhesion of current on

430 sq. ft. @ 4000

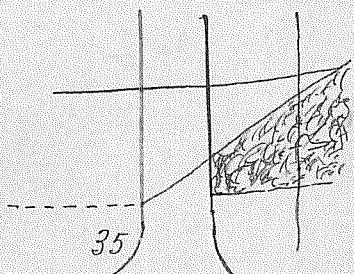
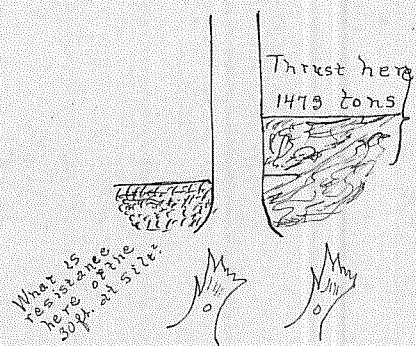
lbs. 860 tons.

Total stability 1409 tons.

You see using factor of safety he even with his stone pier had no surface. Now look at Rock Island bridge pier that moved bodily by the force of the flood and ice. The question that I want to settle beyond doubt is that we take no risks in carrying our columns to bridge seat. As to foundations of Iron columns, I am satisfied it is the best in our river. Again, how far below water can we go down with our columns using the air pressure? Our rock is 70 to 75 feet down in places and I want to found on it if possible."

On May 4, 1868, from Washington, I wrote Mr. J. L. Williams in answer to Mr. Chanute's letter as follows:

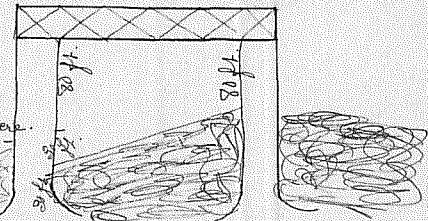
"I am in receipt of Mr. Chanute's letter and he raises a question that I have raised with several engineers, two of whom I wrote about it and have not received their answers. His calculation appears to me to be defective in placing so much thrust against only 25 feet of surface and that on the convex of the four columns. I do not agree with him in this again: Does he give sufficient weight to the foot of the pier still having 30 ft. of silt around it to restrain the thrust, and this thrust being applied by 11 to 30 ft. of column above the silt, and that the column is on a base 12 ft. square for the exposed section of column resting on concrete or stone foundation? Now, if it were possible to scour as he says 30 ft. on one side of the Pier with three spaces between columns about 10 ft. and two of 7 to 8 ft. would the silt stand, as he suggests, perpendicular, washing one side of pier 30 ft. deep and leaving other side untouched, would not the silt slope through the openings as fast as scour worked down and rest at an angle? Thus: Now I take it the entire weight of column above bottom of scour with weight of bridge on columns must be moved with the force applied where he puts it, all leverage is taken away and unless the columns are perfectly founded, I say they should go to rock. I do not see how they are to be moved and I do not see how a pier founded on wooden piles could stand one moment under the circumstances he suggests, and I would be opposed to any foundation except iron columns--masonry it would be impossible to carry to rock. If Chanute's theory is correct then we must have more area to our foundation using 8 iron columns with stone superstructure.



I have not much faith in saving quality of rip rap around piers until you get an island around each pier with breadth and length sufficient to prevent its moving down stream by the under of side wash of current. I have seen so much of it tried. I should use it around the pier continually until the permanent island was formed, but, in my opinion, it will take years to make it secure.. There are some risks in all plans. I think no more or so much in ours as any other that could be gotten up. The dyke I have always had doubts about, but as all our river and overflow is confined within one mile, and three-fourths of overflow is through thick willows with dykes above it, that have stood all floods, a dyke at this crossing may work, as we only stop really 500 feet of clear water way at high water and which could not be over 10 ft. deep under any circumstances.

I am glad to have Chanute criticize all the plans. I will send you for him plan of bridge as soon as I get it. He may be right on Ice-breaker columns but as they carry no part of the line of the bridge it was thought they would not go so deep; however, I should feel safer with them down 60 feet even if they should turn over. I do not believe the main columns so thoroughly braced and tied together with 30 ft. of sand left surrounding the one tied to next pier by a truss, could be moved; the whole construction virtually forms a truss of itself, one side being the river bed; two sides the columns and upper side the superstructure, and the pressure of Chanute is directly against the line of its greatest strength, as thus:

Now, I take it the wash must be parallel to the pier; there is no danger for it from any other direction and must be in direction or very nearly direction of the line of bridge." Force Applied Here.



On May 11th, 1868, I received from Mr. McAlpine the following long and interesting letter taking up my specifications, plans etc:

Stockbridge, May 11, 1868.

"I have just returned home after an absence of ten days, and find your two letters of April 28th and May 2nd, and the specification for the piers for the Omaha bridge.

I was confined to my room for six weeks by a cold and its resultants, but was forced to leave home ever before fully recovered, as it was necessary to complete the arrangements for raising our Niagara bridge (the longest span in the world, 1268 ft. with the floor 180 ft. above the torrent.) I was also compelled to arrange for starting the bridge at Oswego, which I have promised shall be completed this season, and I must start off immediately again to commence on the different water-works which I have in hand. Besides all these I am in daily expectation of a meeting of the commissioners, of which I am one, of the New York and Brooklyn Bridge where the foundations will have to be placed more than 70 feet below low water.

In spite of the interesting professional character of these works, the foundations of the Omaha bridge are all absorbing in my mind and take precedence of any other, and I hope you will continue to write me in regard to any difficulties that occur to your mind or are presented by others. If you desire it, I will go to Washington and spend a few days and discuss the question fully with you. I will take up these points presented in your several letters, seriatem.

Letter of April 28th. 1st. On the supporting power of the columns when they are not extended to the rock. The lateral adhesion of the earth to iron piles of columns in moderately good soil may be taken as equal to a half of a ton per square foot of its external surface in contact with the earth (for the safeload which this portion of the support gives).

Your fine sand when undisturbed by the river current will give probably a high-co-efficient, as is demonstrated by the difficulty of driving a wooden pile beyond 30 ft. in such sand. The support derived from the area of the bottom of the pile (which will be far below any scour or the effects of saturation) might perhaps be taken at ten tons per square foot, but for greater safety, I would prefer to take five tons. I calculate the supporting power of your columns as follows:

Depth below low water 60 ft., scour 30 ft. bottom cone 8 ft. high, leaves 28 ft. of depth in contact with the earth which multiplied by  $26.7 \times (3.5 \times 3.14)$  747.6 square feet and gives 373.8 tons, supporting power. To which add the bottom support, namely - Concrete 12 ft. de.-113 Sq.Ft. areas 5-565 tons supporting power, and  $565 \times 373.8$  tons total supporting power. The lower conical section of the column being filled with concrete, the expanded base of concrete below it becomes an integral portion of the column itself and therefore its area instead of that of the iron must be taken. The weight of the bridge and the effect of the moving load I have assumed at 5000 tons on each pier. Each of these columns will then have nearly twice the supporting power regained or each pier nearly four times as much, remembering that I have already reduced the assumptions <sup>of support</sup> to a safe limit. If you assume the scour to extend to 40 ft. below low water, the two columns will have a safe sustaining power of three times the load assumed.

The concrete base is taken at but two feet more diameter than that bottom of the column. At Harlem I extended it outward in quicksand to 5 feet more diameter, and I have no doubt but you would do so at Omaha to an equal or with cheap iron roofing to a still greater extent - so that you might even dispense with the conical iron base and obtain a concrete area of at least 13 ft. diameter, which would give an additional support of 100 tons to each column more than I have above taken, and if the conical iron base is used and the concrete expanded 5 feet beyond it, it doubtless what I have above calculated for the bottom support (i.e., a greater expansion of the base). This I also regard as entirely practicable. In that case (i.e. a greater expansion of the base) the depth below the column (of the concrete) should be greater, say to 5 ft. and I assure you that you can obtain a depth of 5 or 6 ft. below the bottom of the iron shell without any doubt whatever.

In the plan which I submitted to you I proposed columns of 8 ft. diameter. I see that you have enlarged them to 8 1-2 ft. Under every condition in which I have examined the question, 8 ft. seems to me to be ample and except for stability (in the line of the axis of the bridge) even less diameter would answer.

2nd. The columns treated as columns of support. Hodgkinson's formula is as follows:-- $W.44.34XD3.55-d^3.44-11.7$  for columns here the length exceeds 30. diameters (3.55 and 1.7 are the powers of D. d and L.). W. being the breaking weight in tons and D & d the diameters outside and inside of hollow cylinder in inches, and L. the length of the columns in feet.

My brother has worked out this formula in the case of your bridge, using logarithms to raise D & c. and L. to the fractional powers. I gave him two cases, viz; assuming the length of the columns at 110 and at 140 feet. The former being the length assumed after a scour of 30 ft. had taken place, and assuming that at a depth of 10 feet lower than the scour the sand would so firmly embrace the column as to prevent lateral expansion and thus in effect make this equal to the bottom of a column and the latter (140) feet, and receiving no lateral support from the surrounding sand assuming the column to extend to the rock. In neither case did he calculate the additional strength which the columns will derive from the horizontal and vertical flanges, nor from what I forgot to mention to you, viz: the increased thickness of the shell or of the increased depth of the vertical flanges which would be given between low and high water-to further resist the shocks from floating bodies- nor from the cross bracing between the columns. His result is as follows: A column of 8 1-2 ft. diameter 1 1-2 inches thickness of material and 140 ft. long will break with a load of 13532 ton and 100 ft. long with 20397 tons. The columns not being subject to much vibration may be safely loaded with one fourth of these weights, and with the additional strength derived from the flanges &c. as before stated, may be regarded as 20 times the necessary strength as mere columns of support.

3rd. Reasons for carrying the columns to Bridge seat - the universal practice among engineers who have used these columns. They offer less obstruction to the flow of the water, and consequently lessen the scouring effect. They are more symmetrical and produce a more striking effect. They will be vastly more interesting as an engineering work and peculiarly appropriate at the portal of the greatest work of the age. They much reduce the weight upon the foundations. They may be erected in a tenth of the time and at any season of the year, weather or floods. They have superabundant stability both vertically and against the thrust of the bridge (if any) and against floating masses. The relative

cost of iron and stone above low water will depend upon the locality. In your case I doubt whether you can get suitable durable stone for the piers except at a greater cost than has been contemplated and these circumstances would change the comparisons of cost.

I have just returned from Niagara where I found that they had been obliged to cut out and replace a great many of the face stone of the towers of the great railway bridge, and to build walls outside to protect them. Some of the beautiful structures on the Erie Canal, not a quarter of a century old are failing from the disintegration of the stone. This subject has been too little regarded by our American engineers.

4th. The difference of expansion between iron and concrete. The expansion of the iron shell under the greatest changes in temperature will be about three-fourths of an inch, and of the masonry filling two-thirds as much, which difference distributed over the length of the column will produce no appreciable effect. I do not regard the concrete filling as giving any vertical support to the bridge (that is except the filling of its two lower sections) but it undoubtedly adds to its strength as a "column of support" and considerably to the inertic and stability of the column.

5th. I do not regard the continental experience with this kind of piers as at all equal to that of the English engineers in England and in the Colonies. The recent discussion on my paper at the Institution in London on this subject showed that even the latter could learn something from our side of the water. The more recent practice of the continental engineers, and to a less extent of the English, has been rather in favor of the use of pneumatic and hydrostatic caissons instead of columns and piles, even when the latter was, in my judgment emphatically the most appropriate. In your case, however, there is not a shadow of question that the columns are the only plan to be considered, unless you desire to experiment, as Chanute has done.

The Clyde Bridge columns (just finished) were sunk in sand 76 ft. below water, the Saltash caisson is 90 ft. below water and a bridge 100 ft. above it resting on iron columns of that length. The Chepstow Bridge over the Wyoming was on columns 142 ft. long, 6 ft. diameter, metal 1 1-4 inches thick sunk 48 ft. in the ground with 44 ft. depth water and 50 ft. clear headway, making 94 ft. above the ground. The Charing Cross Bridge piers resting on 2 columns 10 ft. diameter, metal 1 1-8 inches thick 07 ft. long with 35 to 45 ft. penetration. Two of these columns carry four lines of railway.

Your plan although higher is relatively as strong and stable as these. The iron columns of the Chepstow Bridge have been subject for sixteen years to the blows of sea-going vessels, and those of Charing Cross to the smaller Thames vessels, but moving with great velocity on the ebb tide. A good many vessels have struck these columns and been crushed, although their shells of 1 1-8 inches thickness only aided by vertical flanges and concrete filling with no stailings- have never been injured. I can find no record nor did I ever hear of one of these columns which had been injured by blows, except one at Moilin, in France, which the English contractor asserted had been previously injured in transportation.

The two cases of unfilled columns at the Pedee and Harlem which I have before cited to you, which had only 8 or 10 ft. penetration shows not only how immovable these columns are but how strong they are to resist impact even when entirely unprotected by stailings. My brother reminds me of a case in point at Harlem, where a column by carelessness got 8 inches out of perpendicular when at a depth of less than 15 feet into sand, the interior excavation being wholly removed, there was applied to right it the following power: Treble-sheere blocks with a luff of double sheere blocks, and a second luff of the same carried to a powerful crab of 96 to 1 and six men straining upon its ninches with their utmost power could not stir it a hair's breadth. We could only restore it to its vertical position by loosening the earth around it with an excess of air pressure continued for nearly a day.

In your case with your eight foot columns driven to 60 ft. below low water and scoured out to 40 ft. a pressure applied at 90 ft. above would break the column before it would yield laterally in the 20 ft. depth of sand at the bottom, but if you apprehend any danger from this source, extend your columns if you please ten feet deeper. It will cost but little more than the metal and concrete.

6th. Can the columns be driven exactly vertical? The American experience, except at Harlem, has been unfortunate in this regard. At Harlem we drove them without a variation of an inch to 50 ft. depth. and would have driven them with perfect exactness if it had been necessary. With a fixed platform (not a float) you can drive the column in your sand with perfect accuracy. At Harlem we controlled them with four guy ropes, and we never allowed the column to vary an inch from its vertical direction even when the bottom struck sloping rocks. The true secret is to place it correctly at the beginning and never allow it to swerve from that direction. My brother says he will pledge himself to do this almost without extra cost, and I agree with him.

The Printed Specifications. 1st. As before remarked, I see no reason for making the column more than 8 ft. diameter, or more than an average of 1 1-4 thick (inches) although I would strengthen them with deeper flanges or more of them from near the Scour line and where they are subject to impact from floating bodies and also by wooden diagrams of seasoned oak opposite the ends of the brace between high and low water as I showed on the plan submitted. The diaphragms will absorb a portion of momentum of shocks (as the wooden ice-breakers do) and convey it to the four shells of the two columns, and thus distribute its force.

2nd. I see no sufficient object in placing the horizontal flanges on the outside of the columns above high water.

3rd. The cross bracing between the columns should be carried up as high as the bridge seat, and where the depth of water will allow it, I think heavy wooden braces might be placed between the column below low water as shown on the plan.

4th. The ice-breaker only needs a vertical support at its outer extremity and at the "rest" on the upper main column. The wooden floor is abundantly strong to carry the filling. I prefer the upper end of the ice-breaker to be nearly as broad as it is at the main column. The two smaller upper columns will have but little service to perform, except to hold up about one fourth of the weight of the ice-breaker. A blow in the direction of the line of the pier will be sustained by the inertia of the ice-breaker, and the strength of the two main columns, while such a blow as a floating body could give, striking at an angle to this line, even at the upper extremity of the ~~standing~~ will be amply met by the stiffness of even small columns.

5th. I would prefer to use closely packed stone in the ice-breaker instead of concrete, as it may be sometime a necessity to remove some of this filling in order to replace an injured timber. It might be well to cover the upper portion of the timber with boiler plate iron.

6th. The superstructure of the bridge should be supported directly upon the metal of the column. The English practice is generally, not always, to support it upon the concrete filling, but as the friction and adhesion of the latter to the shell is very great any weight placed upon the concrete will be conveyed to the shell within the distance of the length of two of the sections, or within 20 ft. of the top and hence below the distance, the shell almost alone must carry the weight.

7th. I like your idea of extending the columns to the rock and I would do so even at a depth of 80 ft. In this case they become columns of support and may be reduced in weight. There is no difficulty in leveling off and embedding the base in the rock at any depth and attaching the columns firmly to it by interior braces bolted to the rocks and columns.

Letter. of May 2nd. 1st. There is not a modern bridge built in England with a shell of more than 1 1-2 inches thickness and generally much less. It is only those first built in Europe and America where they are thicker. On the Charing Cross Bridge a shell of an inch and an eighth thickness is strengthened by vertical flanges which is the best disposition to make of the metal.

2nd. The ice-breaker columns should be carried below any possible scour, but there is no danger of their pulling the pier over, as their fastenings would give way long before they exerted any dangerous tendency in that way, and they would become a broken lever; long before they would act as a "bent one".

3rd. In regard to going deeper than 80 ft. below low water with the main column, I presume Mr. Chanute is in danger of erring as much upon one side as he did on the other in planning his works, nevertheless it is a subject which should be carefully examined. If you apprehend a scour of more than 40 feet you ought certainly to extend the columns that much deeper.

4th. Are columns of 8 1-2 ft. diameter stable enough? With caisson of considerable length and width, a scour of 30 ft. deeper on one side than the other might occur and produce the effect described. In the plan of columns proposed with the character of the silt and sand at your place, and with the current sufficient to abrade the bottom to a depth of 20, 30 or 40 ft these currents around the circular forms of the column could not possibly produce a scour of more than a foot or two deeper on one side than the other. Even in stiff clay there could not possibly be more than a few feet difference. It is not possible to conceive any such arching of such light material under the circumstances stated.

5th. Mr. Chanute quotes almost exactly my published language in regard to the proper and impropser use of rip rap. It is useless to attempt to place the rip rap until after some deep scour has been made and then if freely and judiciously used it may prevent a future deeper scour.

6th. As I have before stated it is not possible for the sand to scour out more than a few feet deeper-below than above, any one of the columns, and therefore that no such pressure as estimated can be brought against them. In the line of the piers these two main columns are evidently two thousand times stronger than necessary to withstand any possible pressure from the sand. The unfilled column at Harlem, which was struck by a steamer of 500 tons moving 5 miles an hour, and was absolutely unaffected by the blow. My brother and myself stood on a platform connected with it and within 20 ft. of the column. Your filled columns with twice the penetration, one-third more diameter, thoroughly cross braced to another column of the same and loaded with the weight of the bridge, would withstand more than ten times as severe a blow.

7th. How far can you go down with the air pressure?"

My brother and his workmen worked under a pressure equal to a depth of 85 ft. below the water, and believes as I do, that another atmosphere added would produce no serious inconvenience. In other words that a 100 ft. below the water is readily attainable. This is confirmed by the experience at Saltash, and although they suffered inconvenience there at 90 ft. depth, yet our experience at Harlem enables us to judge of the cause of their trouble and how it might be prevented.

In conclusion I have to ask of those who object to your plans of columns what substitute they have to offer? On the other hand, I will say to you that after the study and consideration which you have given, and with suitable and experienced assistants you can construct your piers either wholly or iron or with masonry resting on iron piles or columns with a certainty of complete success.

Note:- If you desire to further discuss the stability of these columns, you can take the horizontal resistance of the sand below the scour at fully ten tons per superficial foot for the semi-circumference of each column, 133 tons per foot of height, or what in this case would be below the resistance, say the diameter of the column ( $8.5 \times 10 = 85$  tons). These two columns are so braced (horizontally between high and low water, and tied and braced vertically) and tied together at the top by the weight and fastenings of the bridge that they might almost be considered as members of the same structure. That is, that the resistance of each column adds perhaps one half of that of the other, when pressure is applied only to one. The weight of the two columns, concrete, braces and part of the steaming and of the bridge will give an insistent weight of 1500 tons for each one may, for the reasons before stated, be taken at 1000 tons (or together at 1500 tons) for the resistance to a thrust in the line of the axis of the bridge.

The resistance in the line of the columns is much greater, as it has that from the smaller ice-breaker and the vertical cross bracing between the mai columns renders the whole pier as one mass, with the sand resistance of all the columns.

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The pressure from an ice gorge or of flood wood would act as against the sand resistance at the bottom with a leverage equal to the depth of the water; but the weight and even lateral stiffness of the bridge on the other hand, and a part of the weight of the columns would have a much greater leverage. Hence, I assume that you have only to resist a force equal to the pressure of the ice or flood wood without leverage. The sectional surface of the columns below low water being so much less than that offered to the current in a stone pier or wooden piles I believe that the gorge would be much less likely to form, and would be rapidly removed from below by the almost unobstructed currents, and therefore that such gorges will never exert as much effect upon the columns as upon other forms of piers. Aside from this consideration if they are driven to a depth of 20 ft. lower than the scour they have abundant stability, and therefore that the only question to be considered is their strength to resist such pressures. A rough calculation entirely satisfies me on this point but if you desire to add to this strength, you can introduce interior cross bracings of iron.

Again if you wish to give greater stability to the pier in the line of the axis of the bridge, you may substitute four columns of 4 ft. diameter for 2 or 8 and place them such distance apart as you please and cross brace in both directions. The cost of the metal in 4 columns would be put little more than that in two of twice the diameter. The cost of sinking would be something but not very much greater I see no necessity for this change and I only suggest it to you to meet an objection.

There is a difficulty in the discussion of a new and in some respects complicated subject like this by correspondence as one would do verbally, because sometimes a single word in reply reveals to you that you have omitted to state some material point. I would be glad to spend an evening or two with you, and then I think the whole subject would be satisfactorily developed.

I am daily in hopes of receiving a printed copy of the discussion at the Institution of Engineers in London on my paper in which some of the strongest men in the profession joined. They devoted two meetings to the paper, to the exclusion of all other matters, an unusual time which showed the interest it excited there.

P.S. The above has been written from dictation, which has prevented me from arranging it as orderly as if I had written it. If I have omitted any point on which you wish my opinion please remind me."

On May 19th, Mr. Chanute, in speaking of the pamphlet of Col. Seymour on a low bridge, wrote that he had read the pamphlet but did not recommend the plans, believing a draw bridge is allowable in the Missouri River only where there is a well-defined channel next to a rocky shore, with powerful interests committed to keep it there. Would advise a high bridge if connections were to be made with other roads at a specified level and distance, and explains pressure and friction on tubes or piles.

On May 23, 1868, from Washington, I wrote Mr. H. S. McComb, the Chairman of the Bridge Committee, giving the cost of the two sites, Child's Mill and Omaha crossing as follows:

"I enclose herewith carefully prepared estimates and plans of an iron truss bridge with iron columns for piers and iron stanchions for icebreakers at the Childs Mill Crossing and at the M. & M. or Omaha crossing. These estimates have been made having in view the covering all contingencies and often consultation with some of the most experienced bridge men in the United States, especially with those who are acquainted with this character of work. Mr. Williams estimates are upon masonry piers and by one of iron columns for foundation with masonry piers, there is no great difference in cost, but iron columns for foundation reaching

~~1067~~ 1096

to bridge seat can be put in in much less time, can be worked at all seasons of the year, and as well in night as in day.

If estimate is made for iron columns with masonry stalling plated with iron, it would need about \$1000 in cost of structure and it is considered best by most engineers.

The cost of bridge proper at Childs Mill on this plan

is - - - - -	\$671,534
Cost of approaches including 6 1/2 miles of line -	376,241.
Contingencies and engineering, 10 - - - - -	<u>104,552.</u>
Making total amount of line and bridge - - - - -	<u>\$1,151,552.</u>
In this estimate is \$60,000 for outfit, steamboats, flats, &c.	
Cost of bridge per at M. & M. or Omaha crossing	1,210,683.
Approaches including with line - - - - -	367,086.
Contingencies and engineering 10 per ct. - - - - -	<u>157,773.</u>
Making total cost of bridge and line - - - - -	<u>1,735,512.</u>

I also add here \$60,000 for outfit etc. It is very probable that 10 per cent for contingencies will not be needed, if not then it will reduce cost of work at each bridge over \$100,000. The company are all aware of my opinion on location. I shall not, therefore, discuss that question. I only hope that when located that the company will build an Iron Truss High Bridge worthy of the road and of the great enterprise with which they are connected. No other, in my mind, will meet the requirements of the country or the road and in the end it will be found the best, cheapest and most economical to all concerned.

I have drawn up and am revising full specifications for all parts of the bridge, no matter when or upon what plan built, and I desire to know the conclusion of the Board at earliest possible moment so that I can put my bridge engineers to work on the line adopted. Our surveys, soundings &c. at all crossings have been thorough and are now ready to commence building the bridge at any moment, specifications being ready for such portions as may be contracted for.

In my estimates I have consulted Messrs. McAlpin, Sickles, Scott Latrobe, Rynshaw, Gen. Humphries, Linville and other prominent bridge builders as well as all the engineers now constructing bridges over the Mississippi and Missouri Rivers."

On May 23, 1868, Mr. J. L. Williams wrote me in relation to Mr. Chanute's and Seymour's reports as follows:

Ft. Wayne.

"You will, of course, regard Mr. Chanute's cautions on page 2 about exposing his calculations and his views. I presume he expects me to show all his correspondence to you, but, of course, you will not use his name with others too freely. What he says of Col. Seymour's plan I will read to some of the board when I see them. His views are to the points were a low bridge is practicable are exactly what I stated to the full board in Seymour's presence, but I did it in far more emphatic language. I think I knocked his plan and estimate into a cocked hat with that Board in about three minutes. I was mad and intensely indignant that such nonsense should be brought before the Board.

Although Chanute may go to extreme of caution in regard to the stability of tubes in the Missouri, yet we would be unwise to throw aside his suggestions without full investigation. While McAlpin's observations are great on this subject in general, yet as to the Missouri River, its ice and current and the effect of the current on its silt, and the effect of obstruction placed in it, such as piers, Mr. Chanute has vastly more experience than anybody else. Indeed he is the only engineer that has practical experience in the bed of this river. To us it is invaluable; though as I said, his misfortune may drive him to extreme of caution.

I want you to consider the effect of sheeting of a field of ice. What I mean is this: Our channel may be diagonal under the bridge so that the current strikes the piers at 20° and 30° angle. Then a cake of strong ice say 300 ft. wide may enter; its lower end being but 200 ft. what would be the effect of this wedging power on our columns at 9 miles per hour?

I must think that McAlpine has no just idea of all the phases and powers which the Missouri River and its ice and its scour may assume. For myself I should not want to present plans and dimensions so much in detail as he does, for a difficult river, which I have never seen, and which is unquestionably so different from other rivers of the world. Mr. Chanute evidently failed to appreciate this river as he now does. I did not fully understand it myself previous to last year. Mr. Talcott certainly knew but little of it (though he had made a railroad along it). When at your house a year ago, he said he would drive wooden piles under a pier, cut them off 5 ft. below water and throw in rip rap.

Mr. Chanute to guard against the diagonal or wedging thrust of ice fields, built his stone piers extra size with a heavy bottom. But, I am keeping you from Chanute's letter, which is really very interesting. You and I seem to be acting jurors with all engineers to furnish facts and opinions. They are very kind."

During my absence in the summer of 1868, bridge matters were held up by the company until they could see where the funds could be raised to build the bridge.

On September 27th, 1868, they made a contract with Mr. Boomer. This contract was a blind for the purpose of inducing men to come in and furnish money for building the bridge, but it was a failure.

On October 9th, Mr. T. E. Sickles, brother of Mr. Fred Sickles, whom I had in my employ on the bridge matters, was made an engineer to superintend the construction of the bridge over the Missouri River under the directions of the chief engineer. T. E. Sickles had little knowledge of this kind of work, but his brother was the most expert engineer in the country for using air in structures and Mr. T. E. Sickles, I think, was appointed in the interest of Mr. John Duff with a view of capitalizing Fred Sickles' knowledge.

Mr. Boomer who had the bridge contract, had written me in relation to his plans and I had written him fully what was necessary and my views on the bridge question, which is shown in the copies of letters heretofore used and on October 10th, <sup>1868</sup> from Salt Lake I wrote Mr. Boomer the following letter in relation to the question of the thickness of the columns. They had raised the question as to the strength:

"Mr. Sickles not arriving, I have given the question of thickness of columns as much study as possible and interpret the specifications to say that the columns are to be  $1 \frac{1}{2}$  inches thick. I understand from you that you are only making them  $1 \frac{1}{4}$  inches thick, taking the average after deducting the flanges. Whether your interpretation is right or mine, I contend that it should be one and a half, in the vertical flanges provided for in specifications. If you cannot cast them, then I should put all the material in the column which is about 11,000 pounds, if I calculate rightly--into the upper main column and on the sections that are between the bottom and five feet above high water mark. This would make that portion of the column about  $1 \frac{3}{4}$  inches thick, as I calculate it, and give us more strength on the exposed column. The downstream column you make  $1 \frac{1}{2}$  inches thick, which, it seems to me, is sufficient. I prefer the 4 inch flange, it acts as a buttress to the column and I cannot see where you

could get as much strength in same material as in that form; however, if it is so difficult to cast them, as you state, I am willing the material shall be used in the vertical flanges, with enough more to give some strength to rim of column, as above suggested.

With this material thus disposed of, leaves us at liberty to put in ice breakers, or not, as we may hereafter decide, after I have further satisfied myself as to the power of ice and other floating bodies."

On October 22nd, 1868, I received the following letter from General William Sooy Smith, whom, it seems, had been selected by Mr. Boomer to take charge of the construction of the bridge under his contract. I was very glad to hear of this appointment because I knew General Smith was a very competent, scientific man and felt that we could work together very successfully, as I had known him very intimately in the service:

Chicago, Oct. ber 22, 1868.

"Your letter of 19th and 20th inst. to Mr. Boomer are received. He is absent in New York; will return here tomorrow or Saturday. I am to have charge of the work for him, and am glad of the opportunity that this will afford us to renew old associations.

We are doing everything possible to commence the work at the bridge site at the very earliest moment. Our machinery for sinking the cylinders is all under contract and well advanced. It will be completed as soon as muscle and steam can do it. I sent the material for screws and men to build them to the site some time ago, and hope they are making good progress with them; though I can commence work on shore as soon as the first cylinders arrive, which will be within the next four weeks."

1868  
On October 27th, from Chicago, Mr. Boomer wrote me as follows:

Upon my return from New York I found yours of the 19th and 20th inst. Gen. Wm. S. Smith is my engineer and informs me he has written you. Am building shops and foundry here ample to do all our work. Fearing that I might not get them up by the time our substructure machinery can be gotten ready I am having 200 tons piles cast; expect to commence shipping them the last of this or first of next week.

When Mr. Sickles ~~was~~ here he and Gen. Smith thought it best to make the bolt holes in the flanges 6 inches apart from centre to centre and make the bolts. I think you will find it better for if they are only

4 inches apart as your specification, they will weaken the flanges. Of course, the bolt will be longer and equal to the strength of the cylinder. I am making the columns 8 1-2 ft. in diameter and shell 1 1-2 inch thick on an average. Would you not prefer a column 8 ft. in diameter and the same amount of metal as in 8 1-2 ft?

There are several little matters we wish to consult with you about and as the directors assured me that they were coming west after Gen. Grant is made President, they wish me to go to Omaha with them and fix up all matters there with you. I hope you will be at home for I wish much to see you.

We shall want the R.R. track in parallel with the work right away. I suggested to them in New York that they put the temporary bridge which you will run across the channel this winter 50 ft. above the foot of the ice breaker to the piers. It will be of great service to us in guying to it, &c. They saw no objection to it.

I intended to have been at Omaha before this, but my buildings have dragged so thought it would be economical to drive them up at once.

Your company now owe me over \$70,000 for Howe Bridges framed and shipped. I am now framing a bridge today. My payments for metal and labor for your work is enormous, and that work together with your Omaha bridge has busted me. I have telegraphed Dr. Durant today begging him to remit me \$60,000. Cannot you arrange it so I can get my pay promptly? Between your several engineers my accounts get mixed up I fancy, at any rate I am not paid promptly; have received only two payments and then on account and for \$12,000 each since I have gone over the line with you in

April last. You will prevent much suffering with cramps if you arrange the matter. Hope to see you at Omaha next week."

Mr. Boomer's letter indicated how impossible it was to do much on a bridge until the company obtained some money. They could not do it under their charter as that only gave them authority to issue \$16,000 per mile and I was urging upon them the necessity of obtaining further legislation and making the bridge an independent concern upon which tariffs could be charged sufficient to pay the interest on bonds that would be issued upon it. I prepared a bill and sent it to the company for consideration.

On November 13, 1868, Mr. Boomer and Mr. Smith came to Omaha and I took them over the bridge site and explained to them thoroughly the conditions and everything, and the obstacles they would have to meet. General Smith thought the columns were too thin; that they should be 4 inches thick. I took up this question with the engineers but Mr. Blickensderfer calculated that a column with 80 foot pressure on the head would be 680 foot to the square inch and Warren thought that the pressure on the side was 2500 pounds and both said that the trestle strength of cast iron is 10000 lbs per square inch. This being the case, I could not see where the danger would be from the bursting columns.

Mr. Boomer finally concluded to put up his buildings and work yard on what is known as the M. & M. railroad reservation on the high table near the Missouri River. Mr. Smith disagreed with Blickensderfer and Warren; he claimed that the tensile strength of cast iron is 14,000 lbs. to the square inch and the pressure on an eighty foot column of water is about the same and wanted the size and thickness of columns increased two inches, which would increase the cost of each pier \$3,000.

On November 17, 1868, I took up with General Wm. S. Smith, the strength of the columns 1 1-2 inches and what it would carry put down eighty feet and showed him the opinions of the different engineers and our complete calculation. He found that he was evidently mistaken in his theory and they agreed with me on the thickness and the width of the flanges.

In December I sent Mr. T. E. Sickles to Cincinnati to inspect the cylinders which had been cast. He reported that there had been nine cylinders cast, four of which have been faced off, and one has about one-half the bolt holes bored. These holes had not been properly laid

out on the flange as cast (2 1-2 inches wide) but on a flange 3 1-2 inch wide they would be correct, as provided in my specifications and he came East to consult me in relation to the matter.

On January 7th, 1869, General Smith wrote me that they were ready to commence setting up their machinery and also informed me that Mr. Boomer had taken the contract for building the bridge across the Missouri River at Leavenworth. There was a question raised in relation to making one span of 500 feet across the River and I wrote to Mr. J. N. Lynnville who had charge of the building of the bridge at Steubenville, Ohio, and he wrote me as follows in relation to such length of span:

Philadelphia, Pa. Jan. 18, 1869.

"My experience in designing and superintending the construction of the superstructure of the Steubenville bridge convinces me of the very serious difficulties that would be encountered in constructing a span of 500 ft.

In the Steubenville channel span a large portion of material is employed to stay the structure laterally which adds to the weight and diminishes to that extent the bearing capacity of the trusses. As the length of span and consequently the height of truss is increased, the quantity of material required to be used for this purpose increases in rapid proportion.

With the longer spans greater width of base is necessary to insure lateral stability. The material required in construction cannot be manufactured in sufficient lengths, and additional weight and deficiency in bearing capacity results from numerous joints and splices.

The piers being longer and more massive to support the increased width and weight of superstructure, the cost of masonry is thereby greatly increased.

Since the cost of the trusses, independent of the construction, increases nearly as the squares of the spans, it is obvious that the cost of a span 500 feet all things considered would probably exceed three times the cost of a span of 300 ft. length.

The risk attending the erection of spans of different lengths over the channel of navigable streams is in proportion to the weight of material to be handled. The length of time required to erect the structure, and the immensely increased loss that would result from accidents by floods or otherwise. The work would not be assumed by any prudent bridge building company without a very large margin to cover contingencies.

While abundant evidence in my opinion has been heretofore adduced to prove the sufficiency of 300 ft. spans, to meet the wants of river navigation it cannot be maintained that 50 to 100 ft. additional clearance would not afford more space than is reasonably required for the passage of tugs or steamboats.

Legislation enforcing the useless expenditure of money in the construction of spans of unnecessary length would be prejudicial to Commerce and Trade over land routes, and by retarding the business and growth of cities would injure rather than promote the interests of inland navigation. Careful and mature consideration of this subject has confirmed my opinion that spans exceeding 350 ft. are unwarranted by the engineers of river navigation and involves an injudicious expenditure of capital."

This letter simply shows what progress has been made since those times in spans of bridges, but even now the truss of 500-feet is difficult to handle.

The Board of Engineers who met on August 1, 1867 to consider this question, reported that a 500 clear span or 520 total span would cost more than twice as great for running foot of bridge than span of 368 foot and not less than three times as great as a span of 404 ft. and the unanimous result, as expressed by them by resolutions, showed that the cost of the three spans of 520 feet each of the St. Louis bridge which cost more than \$2,325,600 more than the same length of bridge would cost in spans of 368 feet and 364 feet.. Outside of the suspension bridge, the only single span of great length then known was the in Holland, which was 492 feet long and which had been recently completed.

1869

On February 15th, column No. 1 of pier No. 11 was sunk two feet by use of the sand pump. The next day the cap was bolted on and the air exhausted when it sunk 16 ft. in two operations about half an hour in all. The next day the sand pump was again used and another section bolted on, ready to resume sinking today. This was the testing of the work and so far everything seemed favorable for a rapid and safe prosecution of the work. The thermometer was below zero. The ferry-boats were running but it was feared the ice would stop them. The temporary bridge was taken up, including the piles.

On March 22nd, 1869, Mr Sickles wrote me that Col<sup>m</sup> No. 1 is now down to 43 ft. below the surface or 40 ft. below low water. The material had been excavated entirely by the air jet which proved to be preferable to the steam-jet. The sand was an excellent quality for making concrete or mortar and was being saved for that purpose. Considerable time was lost by cold weather and some mishaps which naturally came, and the real working time on the columns altogether had not exceeded four days.

1869

On May 8th they broke two sections of Column No. 2, 35 feet below the surface. The castings were defective and we found it exceedingly difficult and very expensive to remove the two lower sections and they wanted to move the line of the bridge its width to the north. This I declined to do. I was afraid we would have these troubles

and we might as well meet them in the beginning as later on, and we succeeded in patching up the broken column, getting air sufficient to unbolt and remove them.

We had so much trouble in obtaining men to work inside the columns. In August I sent Mr. Sickles to San Francisco to make arrangements with Cisco and Wallace to employ Chinese, but it was a singular fact that it was impossible to get the Chinese to come as far East as Omaha to work under a contract. They were perfectly content to work continuously East as long as they could keep in touch with San Francisco and their own people.

The financing of the bridge question became a very difficult matter and it became evident to the company that we must get a separate charter which would allow us to pay toll over the bridge and sell bonds. The company did not like to go before congress to ask for this and so they authorized me to obtain a private charter in which the Iowa roads should be stock-holders and control the bridge. I immediately got into communication with all the Iowa roads and they agreed to take hold of this matter and become a part of it on condition that all their transfers should be made on this side of the river, the Union Pacific under the law making their terminus here and this the Union Pacific agreed to do. This action of the Iowa roads and the Union Pacific would be of great benefit to Council Bluffs. I had bought about one thousand acres of land on ~~Iowa~~ side of the river for the Union Pacific and it was planned that the transfers should be made on that property. After making this arrangement, I went to Washington and had a bill introduced in the House passing it through the House, and it went into the Senate. I placed it in the hands of Senator Harlan of this State who agreed to look after it and pass it and I returned to Council Bluffs. Senator Harlan was a friend of Alvin Saunders who was a prominent citizen of Nebraska. He communicated with Governor Saunders telling him of the bill. This stirred up Omaha who did not understand the matter very thoroughly and Governor Saunders and other citizens of Omaha came over to Council Bluffs and induced some of the citizens of Council Bluffs to oppose the giving of this charter to myself and others,

and others saying it was a private matter that would be of great detriment to the city on account of the tolls and stirred up quite an opposition; so much so that a meeting of the citizens of Council Bluffs was held on the corner of Pearl and Broadway. Mr. Crawford was the chairman of the meeting and Messrs. James, Larimar and other citizens, whom I do not remember, took strong ground against it claiming that if a bridge was built here it should be free from tolls and under the Union Pacific charter. They were answered by Judge Baldwin, Pusey, Thomas Officer and myself. I could not, of course, disclose the agreement I had with the Iowa people but I stated to them that the bridge was in the interest of the Iowa roads and the Union Pacific would be obliged to make their terminus on this side of the river, but it made no impression upon the crowd. They passed resolutions, calling on Senator Harlan to defeat the bill in the Senate, which was done, and all work on the bridge was stopped.

The Union Pacific and Iowa roads were thoroughly disgusted and the action of this meeting was almost a death blow to this city.

I took no further action on the bridge matter, my duties calling me away from here to other fields of work, and I went away discouraged at the action the citizens here had taken and the lack of confidence they had placed in a person who was trying to help them.

After I left, the Union Pacific Company went before Congress, obtained the charter for building the bridge, on which they were authorized to ~~pay~~ collect tolls sufficient to maintain the bridge and pay the interest upon the bonds issued to build it, having no conditions with the Iowa roads, giving them full power to make their operating terminus wherever they pleased. This action called forth no protest from the citizens of Council Bluffs. They had behind them all the influential citizens of Omaha. } Under this charter the bridge was built and after a long struggle with the Iowa roads to force the exchange of traffic, passengers, etc. on the Iowa side, they were all forced over the bridge to Omaha. } The decision of the United States Supreme Court that the terminus of the Union Pacific was in Council Bluffs forced them to build a transfer here for the purpose of transferring passengers from one road to another. For a long time this was used by the railroads for the transfer of passengers, but is now used only for the transfer of freight. The congestion on the Omaha side is something fearful.

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It is costing the Union Pacific millions of dollars to make their transfers in Omaha on account of the want of room. This could have been saved if it was made on the Iowa side of the river. The great tract of land which the Union Pacific owns on this side is rented out for farming purposes, only about 160 acres of it being used for tracks and it has always been a problem to me, when every operating head of the Union Pacific has seen the inconvenience and knows the cost, why none of them have utilized the ground they own for all this work. No matter if the other roads run into Omaha locally, the transfer of passengers, baggage and everything pertaining to it should be made here where there is ample room. The eight trunk lines into Council Bluffs all running into the Omaha depot at one time often causes delays of hours, which is not only costly to the Union Pacific but to all those roads.

Of course, after all these years, the citizens of Council Bluffs see the great mistake they have made. The Iowa roads also see it but it is too late now to overcome it. The amount of money that the Union Pacific has spent in Omaha for accommodations will only force them to spend a great many millions more for the purpose of accomodating all the trans-continental traffic which is growing beynd all their conceptions.

From the passage of the law of 1862 by the Government, authorizing the building of the Union Pacific Railroad, until its completion in 1869, there were several crises which threatened the defeat of the work.

First the law of 1862 provided that the subsidies in bonds should be second mortgage; the Government bond holding the prior <sup>im</sup> lien. It was found possible to raise any funds for the building of the road under this condition; therefore, nothing was done except some preliminary surveys.

In 1863, when I went to Washington at the order of General Grant to meet President Lincoln, after the question of the terminus was taken up and fully discussed, the President went into the question of building the road with me showing a great anxiety to have it done. My answer to him was that I thought it would be impossible to raise private funds for the building of the road; that it would have to be

built by the Government. In answer to this he said that the Government had all on its hands now that it could attend to and it could not take the burden of building a railroad, but that the Government was ready to give its aid in every way possible to any company who would undertake the building of the road. I pointed out to him the failure to raise any money under the law of 1862. He was willing that the law should be changed so that the company's bonds should be a first mortgage, the Government accepting a subordinate lien.

From Washington, I went to New York and laged before Mr. Durant, Mr. Dix, Mr. Cisco and others who were then at the head of the company, what Mr. Lincoln had said. This induced them to take up the matter again and to go before Congress to have the law changed, which was done in July 1864. Even then Mr. Durant was unable to raise the funds to go ahead with the work successfully. Under the law of 1864 he undertook to build the road but failed and New York parties came in and put in two and one-half millions of dollars to start the work. During 1865, the road was completed as far as Fremont and surveyors had been kept in the field making preliminary surveys as far west as Salt Lake. Mr. Durant had utterly failed to obtain any additional funds when the Ames' of Boston took hold of the matter and with their capital and great credit and financial following in New England, they were able to sell the bonds and obtain money to push the work as far West as the East base of the mountains.

When I took charge in 1866, the Ames' were in control, but the cost of the line from the Missouri River to the East base of the mountains, over 600 miles, without any material along the road except the bare earth, everything having to be brought by river, made it so costly that when they reached Cheyenne in the winter of 1867, they were absolutely halted for funds. // It seemed as though the work would permanently stop there until in December 1867, I went on to New York and presented the maps, profiles and estimates from Cheyenne to the East line of California to the company, showing that the cost of the ~~work~~ from Cheyenne west was far less than the Government subsidies, and company's bonded debt provided in the charter, and that the profit in building the road was to be made in building from the east base of the rocky mountains. // These estimates and the statements of cost which

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Note

I presented to them changed the whole situation and brought new life and more money immediately into the concern so that the financial problem seemed to be finally and favorably settled. At the East base of the mountains, the Government subsidies and company bonds charged from \$16,000 per mile to \$48,000 per mile for 150 miles and then \$32,000 per mile for all the balance of the distance.

Durant's extravagance and his management in the East had worried the Ames' very much but they did not seem to have the faculty or the power to stop him. There were continual frictions in the Board of Directors. First Durant would be in power, next Mr. Dillon or some Committee. The friction in the East did not reach the work in the West, materially, to interfere with it, until the fall of 1868, when we had layed our plans to build to Salt Lake that year, and we were getting on very well until Durant and Seymour were continually interfering with the lines, antagonizing the Government, especially the Interior Department, until they lost all confidence in his honesty or statements. The management of the Central Pacific was so different -- no factions; one head; their treatment of them was far different to what they gave the Union Pacific, and the continued rumors of how the Union Pacific were changing their lines, the protests of Government Directors, caused the Interior Department to create the commissions to examine and report upon the Union Pacific and finally on the Central Pacific railroad, and the many questions which came up between the Chief Engineer and them, which have been fully explained in letters heretofore given, until finally when Generals Grant and Sherman came into the field, the disputes were settled in my favor, although it did not eliminate Durant and his influence with the Board.

Then came the decision of Mr. Browning, the Secretary of the Interior allowing the Central Pacific to file their line one hundred miles East of Promontory covering ground which we had located and were grading, but which the Central Pacific had only a preliminary line over. President Johnson and Secretary ~~Everts~~, the Attorney General, gave an opinion favoring the Central Pacific in this filing of their map under the section of the law which had allowed the company to build one hundred miles in advance of their work.

- 110 -

This action of the Government, in favor of the Central Pacific, immediately crippled our finances and in the winter of 1868 and 1869, Durant and Seymour had created such a demoralization among all the forces and the inability of the company to raise funds to meet the payments, really placed the burden of keeping the road going upon Mr. Reed, the Superintendent of Construction, Mr. Snyder, who was operating the road, and myself. Everyone on the line appreciated the demoralization that Durant brought and the company was appealed to by all of us to eliminate him, as the numerous letters which appear in my biography shows; also the indisposition of the Company to act; it was a continual demoralization to the construction forces. Orders would go to Mr. Snyder and to Mr. Reed in regard to construction which brought friction between them, and Mr. Durant and Seymour had both been opposing me from almost the time I took charge.

When I went to Omaha as the chief engineer, they soon discovered that I had my own views in relation to the work of organization and to the location, that I was very well known through all that country having commanded it, and had behind me the Government Directors and also the army and that their attacks upon me failed to influence any one locally or influence the company. There were two parties in the Company - the Ames party and the Durant party. The Ames' had the power, if they had seen fit to use it, to eliminate Durant permanently, as they often attempted to do, but for the sake of harmony and in fear of threats and suites, they compromised but they generally stood by my recommendations.

I was very persistent in defending my locations, organization, methods of construction and operation and Oakes Ames, who was a member of Congress, knew that the Government and every head of the different departments had full confidence in me.

Funds became so hard to get that finally, for the last six months before the closing of the tracks, the work had to be carried on without much financial aid from the company. Mr. Reed had to put off his contractors; Mr. Snyder ran his road from what revenue he could obtain and his men were from three to six month back in their pay, and, unless a person has been through such an experience, they cannot understand what the difficulties to be met and overcome were. I raised all the money

I could in the West. At times the Omaha National Bank furnished us with almost their last dollar and I often appealed for money for them from the East to meet what we had taken from them in order to keep them going. I furnished all the money for the payment of my own engineers, the land department, etc.

The Fisk injunctions in the courts in 1868 and 1869 on the company, tied up all the resources of the company and forced them to have a law passed in Congress allowing them to change their head-quarters from New York to Boston to get away from the corrupt courts of New York. Then the construction forces were doing their work so poorly, skipping and skimming over it in every direction so that Mr. J. L. Williams, the Government Director, came in and insisted that three million dollars in bonds should be reserved by the Government to insure a final completion of the work, and on March 3rd, the Government paid over to the Central Pacific some two million dollars in bonds, covering that portion of the Union Pacific road which was already graded from Ogden East 50 miles <sup>over</sup> ~~of that point~~ and track laid to within 50 miles. This was hard to overcome. The only thing that saved us was General Grant's on his becoming President, stopping all issue of bonds under the decision of Secretary Browning and the order of President Johnson and Secretary McCullough.

In the fall of 1868, as the result of so much scandal in relation to construction matters on the road, the Government appointed the Bickens-derfer Commission, the Clements Commission and others to examine the work. Fortunately for the Union Pacific, every one of these Commissions commended the location of the road and its construction so far as it had gone, stating that <sup>the</sup> amount necessary to complete the road as a first-class railroad should be ~~reserved~~ <sup>in final payments</sup> by the Government, which aided us very much in financing, but the bringing in the necessity of expending over six millions of dollars to complete the road up to my own specifications was a hard blow to the company.

*Note* → Finally, as soon as General Grant became President, he having known of the Durant operations, issued instructions to the Government Directors that he should be put out of the Company. This had a beneficial effect and gave the Boston parties more firmness in standing up to the men who were on the line and enabled them to raise money sufficient to relieve

the contractors and the operating department so that we finally were able to connect our tracks on May 10, 1869, at Promontory.

*Mold* If Mr. Durant and Seymour had never crossed the Missouri River, it would have saved millions of dollars in the cost of the road. No one can read the evidence that has been given by everyone connected with the road, as the records show, but what can see that. It is <sup>a</sup> fact that the men at the heads of department's west of the Missouri River were loyal to the property; they were generally honest until they came in contact with the agreements and division of interest which was given Durant and others in the year 1868 and 1869.

The engineers upon the road were very able men. They had their own views upon everything and nobody could change them. In the discussion of all problems with me, they were at first a little timid but when they found I respected their opinion and wanted it, they were free to give it, not only in word, but in writing and stood by the company loyally under every circumstance and no one can read the letters of Mr. Evans, Mr. Blickensderfer, Mr. Hodges, Mr. Morris, Mr. Snyder and Hoxie and Reed without seeing what able, well-poised men they were. Mr. Reed disliked a controversy or fight very much. He was too apt to acquiesce, while he disapproved and Mr. Snyder was just the reverse. He was aggressive, fighting every thief and laggard on the road; <sup>he</sup> could not put up with Mr. Reed's desire to compromise and avoid friction and I had to quiet them often and several times went to New York to keep them from being dismissed by Durant or the Company.

As I look back today upon the years 1868 and 1869, I wonder how we accomplished the work so successfully. making the ~~completion~~ of road then secured <sup>and the</sup> ~~of~~ building 556 miles of main line and putting it in operation in twelve months, all material having to be hauled 800 miles west of the Missouri River. Those were days when money was scarce, when the project was in its infancy and we were very uncertain as to its result, even after it was completed. The whole country not knowing any of our interior troubles was enthusiastic and pleased, and pressed us forward. The Army, represented by General Grant and Sherman and the local officers on the plains was even more enthusiastic than we were and stood steadily behind us giving us their active support in everything that we asked of them. The action which

General Grant took as soon as he became President of the United States to settle the quarrels in New York and sustain the forces in the field, had a wonderful effect. Then the great controversy between the Union Pacific and Central Pacific on the question of the point of meeting and the stopping of their aggressive movements in the obtaining of bonds, caused Mr. Huntington of the Central Pacific to make an agreement with me fixing the point at Promontory, which was confirmed by an act of Congress so that when finally the tracks met at Promontory, we were friendly but each watching the others movements.

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One of the great reasons for our success was that our construction forces were all from the army; most of them had just come out of the Civil War, our heads of all organizations had been officers from Major Generals down. The organizations I had made at the beginning was a military one; every one west of the Missouri River acknowledged me as the head and obeyed my orders implicitly. There were no laws, courts or civil officers through the country we built, and I had the power to enforce discipline and obedience to orders and every time I had to issue my orders, they were obeyed so promptly and effectively that it had a terror for the unruly element but every one knew I had authority to call upon the army to aid me and that when I did call, they responded in a very effective way, sometimes a very drastic one.

It is a great satisfaction to me to know that every President of the Union Pacific, and every general manager and every chief engineer who has been upon the road has paid high tribute to the work of the engineers who laid out the route and constructed the road. They have, in their recommendations, followed the several commissions some seven I think in all, who examined the road from time to time. When the Canadian Pacific were building their road, they based their specifications upon those of the Union Pacific.

I don't know that I have ever heard any criticism upon the road from people who knew anything about it. In 1900, when they were rebuilding the road, under Mr. Harriman, a detailed survey of the road with a view of shortening its distance, its grades, reducing its curvature and adding to its efficiency of transportation in every way that could be possibly done with money, after making all their surveys and examinations and completing their reconstruction, they are the men who have paid the highest compliments to the engineers and construction

forces. Mr. Harriman, the President, especially, commends our work at a banquet in Denver in 1894 saying:

"After three years examinations and the expenditure of twenty million dollars to change the grades to a maximum of 4 $\frac{1}{2}$  feet to the mile, it has been demonstrated that not a mile of road had been built to increase the distance and obtain subsidies; that the location and construction was a great credit to the engineers and executive officers who built the road."

Mr. J. B. Berry, the Chief Engineer of the Union Pacific who had charge of all the changes, paid this tribute to the engineers of the road:

"It may appear to those unfamiliar with the character of the country that the great saving in distance and reduction of grade would stand as a criticism of the work of the pioneer engineers who made the original location of the road. Such is not the case. The changes made have been expensive and could be warranted only by the volume of traffic handled at the present day. Too much credit cannot be given General G.M. Dodge and his assistants. They studied their task thoroughly and performed it well. Limited to law to a maximum gradient of 116 feet to the mile, not compensated for curvature, they held it down to about ninety feet per mile. Taking into consideration the existing conditions thirty-five years ago; lack of maps of the country, hostility of the Indians, which made United States troops necessary for protection of surveying parties, difficult transportation, excessive cost of labor, uncertainty as to probable volume of traffic, limited amount of money, and necessity to get the road built as soon as possible, it can be said, with all our present knowledge of the topography of the country, that the line was located with very great skill."

The principal changes made by the Union Pacific Railroad since 1900 were first the change from the Muddy Creek line out of Omaha to the original Peter A. Dey line, which he so strenuously fought for and which was turned down by Durant and his action opposed by the Government, now known as the Lane Cut-off, which saves eleven miles in twenty-four miles distance but cost four millions of dollars. The next is the line from Sherman to the Laramie Plains, where by long tunnels and heavy work, the grade is reduced from ninety feet to forty-seven feet maximum. The third change is the Cooper Lake line, which is changed from Rock Creek and Medicine Bow to near the original location of the Union Pacific, with a saving of twenty miles of distance. This is the change made when the line was building by the contractors, against the protest of the chief engineer of the road, and caused Generals Grant and Sherman to come to Fort Sanders for a conference. The fourth change was on the Central Pacific road from Ogden across Bear Creek, arm of Salt Lake, known as Lucien Cut-off, saving fifty miles in distance and avoiding the heavy grades over Promontory Point. The original survey of the Union Pacific was from Ogden across Bear Creek, arm of Salt Lake, to <sup>the</sup> south end of Promontory Point, but as stated in another part of this paper, was abandoned because of the twelve-foot of higher water in the lake in 1869 when the line was originally surveyed than in 1900 when the change was made at a cost of some six millions of dollars.

As shown heretofore, I had made up my mind that as soon as I had completed the road and brought it up to the contract and specifications, to end my duties as Chief Engineer with it. I had other engagements in view which required my attention and on January 25th, I wrote to Mr. Oliver Ames resigning my position as chief engineer and on January 29, 1870

received the following letter:

Boston, January 29, 1870.

"Yours of the 25th inst., tendering your resignation as Chief Engineer of the Union Pacific Railroad Company is received.

In accepting your resignation, permit us to express to you our thanks for the eminent services you have rendered this company and the country, in so admirably locating this great national highway.

*Note*  
When we consider the great difficulties and dangers that beset you on all sides while locating the road, through an uninhabited country, and the rapidity with which the work was accomplished, we are gratified and surprised that you have finished this work in so perfect and acceptable a manner. We now have one of the best railroads in the country, notwithstanding it was located and built with a rapidity without precedent in the history of railroad enterprises.

I enclose herewith vote of thanks, adopted by the Executive Committee, in consideration of services in behalf of this company, and hope you will find elsewhere the same hearty appreciation of your valuable services as we now most cheerfully accord to you."

Boston, January 29, 1870

Executive Committee met pursuant to adjournment.  
On motion of Mr. Duff.

RESOLVED--That in accepting the resignation of General G. M. Dodge, Chief Engineer of the Union Pacific Railroad Company, we take this occasion to tender him our hearty thanks for the very able and efficient manner in which he has discharged the arduous duties of his position.

E. H. Rollins,  
Secretary."

After my resignation had been accepted, some of the Durant party circulated the story in the West that I had been forced to retire on account of my having expended large amounts of money unauthorized, etc. I sent this report to Mr. Ames and on February 3, 1870, he wrote me as follows:

North Easton, Massachusetts.

"Your letter in regard to stories being circulated here that you had misappropriated money and been expending large amounts not authorized is received. I have made inquiry of Mr. Duff and other parties here, who will say they have never heard anything of the kind.

I wrote you a few days since, on receiving your resignation, of your position as Chief Engineer of the road, a letter expressing my opinion of your services to the company, and the Ex-committee passed a resolution expressing their appreciation of your services. We have appointed Mr. T. E. Sickles in your place. His position on the bridge requiring his attendance there, and he will have no additional salary for his services as Chief Engineer. I have the very highest opinion of his practical judgment in the expenditures he may order.

The payment of interest on our bonds requires of us the most rigid economy, and the saving in salary of Chief Engineer with quite a number of other salaries will enable us to present a better exhibition to our stockholders. We hope in the coming season to do a large enough business to pay all our interest and put our road in first class condition, so that another winter will find our snow sheds and fences all up, and we will not be liable to detentions by storms that we now are. I feel a strong desire to run the road with the utmost economy, and whenever we can cut down expenses and not impair the efficiency of the road, it is our duty to do so."

While this severed my connection with the Union Pacific Railroad

Company as its Chief Engineer, I retained my position as a Director in the Company taking an active interest in it up to the time it went into the receiver's hands. My services during that period will appear later on in the Dodge records now being completed.

POLITICAL.

*M*  
*1*

Under this head, I have compiled as briefly as possible, the part I took in the politics of my State and Nation. My father was a Democrat living in Massachusetts, in a Whig State and was prominent with Rantoul, Banks and others in the politics of Massachusetts. He ran as Representative in the Legislature and as a member of Congress, but, of course was defeated. He was a member of the Rantoul delegation to Char-  
*Convention*  
leston which was turned out because Robert Rantoul declined to approve the policy of the party in the Kansas Nebraska Question. He stated to the convention that he represented a constituency which thought for themselves and no one could pledge them to the support of the Democratic policy as shown in their resolutions, and that he individually was opposed to it. Upon this they turned out his delegation and admitted a delegation headed by Benjamin F. Butler.

*Note*

I cast my first vote for James W. Grimes, Governor of this State and took a pretty active part in the interest of the Republican party in Iowa up to the time of the Civil War. I travelled over the western part of the State with Governor Kirkwood when he was running for Governor and was often assured that I could represent my County in the Legislature if I was willing to run, but my business and inclination was entirely against it.

*Nali* -7

During all my residence in Iowa, I had supported loyally Mr. John A. Kasson for Congress and took a great interest in his election and was always in close communication with him. In 1865 he accompanied me some three months in my travels over the plains in the Indian campaign.

In the controversy between Congress and President Johnson, Mr. Kasson sided with Johnson to a certain extent, which was very unsatisfactory to the Republicans in his district.

Before I left the Army in 1865, the press in the district and over the State was advocating my nomination to take the place of Kasson. Being a personal friend of Mr. Kasson, I absolutely refused to have anything to do with it; though I was very much opposed to Kasson's position and had written him several letters

in relation to it, but his answers were not satisfactory to me.

In the spring of 1866, I wrote Mr. H. M. Hoxie, who had been the Chairman of the Republican State Committee and who was very prominent in the politics of the State and a very close personal friend of mine. My views in the matter still held to the opinion that on account of my personal friendship, it was my duty to stand by Kasson notwithstanding his position in relation to representing Johnson, and on May 1, 1866, he wrote me the following letter:

St. Joseph, Mo.

"About Kasson's letter--my opinions are: Obligations personally do not cease until the party to whom owed commits some crime or does some act to break the obligation. It is hard to tell where the line begins- I don't think you are in honor bound to support him on the grounds of personal obligations. Obligations politically of course cease whenever the person does not act with the party - I know politically you are under no obligations to Kasson. Your own judgment must decide about the other yourself. As for myself, I hold further, that sometimes he only looked after your interests when I made him. I had to push him to make him do it. Some things he did himself, but sometimes grumbled when I made him work.

I enclose a letter from Frank Palmer; I think he is alarmed, and I don't know but justly. Kasson is hard at work, and will bring things to bear that they don't think of. River falling at Omaha. One steamboat to unload iron at Bellevue so as to haul it out by teams; can't get much nearer than Saratoga to Omaha."

As the time of the convention for the election of a delegate to Congress was approaching, I finally agreed that if the Convention nominated me to serve but stated fully it would be impossible for me to take any part in the campaign or even to be in the State. Judge Baldwin of Council Bluffs, who was a very close personal friend of mine, urged me so strongly that I said to him that if I was elected I would serve, but told him I hoped that I would not be called upon; that my duties to the Union Pacific Railway alone almost prevented my going to Congress and that I would not give up those duties no matter what the demands made <sup>up</sup> <sub>on me</sub> if I was elected.

1866.

On April 20th, from Fort Leavenworth, I wrote Judge Baldwin the following letter:

"I received yours of April 16th. I have also received letters from all parts of the District to the same support, and have got to make a decision. I do not desire the place, but if you and my friends desire I should take it, I will be governed by that. You should take into consideration the fact that I am not a public speaker, that I cannot canvass the district, and that probably my duties will keep me absent a great part of the coming summer and fall. With this I leave the matter with you, agreeing to abide by whatever you think best."

(3)

On May 15th, 1866, I wrote to George C. Tichenor, who had been my aide during the war, the following letter:

Ft. Leavenworth:

"I am in receipt of your telegram and letter and wrote Palmer today. My engagements are such that I must attend to them. I have pledged myself to the railroad interest to devote all my time to them, and it is wrong for me and an injury to Western Iowa to now desert them for the purpose of presenting any personal claims, and I cannot do it. We must get these roads across Iowa in the next eighteen months, and we must also be at or near Denver at that time if we propose to fasten beyond all peradventure the central line as the line to the Pacific, and I say to you that Iowa's fate depends greatly upon our pushing our enterprise that the entire trade of the mining region shall pass through our State. We want to be hundreds of miles in advance of all other projects tending West, and unless I am greatly mistaken, we shall be.

The fight on nomination should be made on principle, not on personal ground. It is to be a contest this fall, purely upon the principals of the Republican party and we want to go into the field with that issue; the party must understand that. They should not endanger the great principal that for years war has made sacred, by any risk on personal objection to the candidate.

2nd To work effectually, the main work should be done from one center- Des Moines. Lay your plans, then write to every county, to the leading Republicans, show them where the danger lies, and plainly tell them the party is bound to be beaten if Kasson is nominated, and let them send delegates for the best man in the district- no matter who he is- but under no circumstances for Kasson.

3d. When the breach was first made between Congress and Johnson, and when principle was trembling and likely to fall as opposed to power, Kasson faltered, went to the side of power on the ground that radicals were breaking up the party, and only returned when he found that old precedents did not work in this case. Five years of battle has made too sacred our cause to allow us to fail without a struggle. For the first time in our history, principal succeeds overwhelmingly as a great patronage and power. Now no such representative should represent Iowa; she has always been known for promptly accepting the gage, and lading, not faltering. To side with Congress now, is easy. To show fight months ago, took men with more nerve than those who look only to patronage for their official lives.

You must look at this fight in making the nomination, discarding all things but the objective point; i.e., a candidate who stands squarely on Republican platform and the fight as he being no side issued but will come to the front under any and all circumstances. Involved in this struggle is, personal popularity; then will do to fill the chinks. These are my views, they are private and satisfactory to myself.

Let my friends fully understand that they will not disappoint me, injure me, or hurt my feelings if they at any time dis cover

I am not strong enough, but that some other is. It would be a favor to me. They must act independantly-under no pledges, and go straight to the objective point, knocking over everybody who stands in their way. I tell you if we lose the District this fall, enough will go to the enemy to keep it for a good long time, and the poor office Holders who are now half Johnson and half Congress will have to give way to down-right rebels, and will be left out in the cold for ages.

It is useless for me to go to Des Moines, I can do no good; I can make no promise, except to stand squarely and boldly to the front in any fight that may hereafter occur. I do not seek the honor of Representative of the District; therefore it would be weak and foolish in me to claim support on personal grounds. It is for the party to say whether it is necessary for me to run, and for them to judge, because you all know if it is not it will be far better for me to give my undivided attention to other interests. I have consented to run because persons in the district have said I was the only one they would concentrate on, and I do not believe that when the leader of the party in the district presents things to them in their true light, that they will for one moment think of nominating Kasson.

(4)

I am a better friend to Kasson than any one who advises him to make this fight. I have stood by him through every phase of his life since he came to Iowa, until three months ago, and I never under the existing circumstances, personal and political would advise him to act unwisely. He should have waited one or two terms quietly and he would have come out far better in the end, and I shall so write him.

Cale Baldwin will be at Des Moines during May. Every man, women and child in the 5th district knows my position, my principles, and they therefore cannot make any side issue, nor can I explain every diversion or hear discussions. You should all be Captains enough to know that in such a fight as you are to make, that your candidate with you would "keep you in hot water" explaining his sayings, and you would be looked up to as dropping the issue in supporting the man.

I expect to leave here next week for Omaha; will telegraph you when I leave. I am now running the Department and Union Pacific road; take charge of the latter May 1st. Remember me to all my friends. I have almost the run of 4th Iowa entirely would not know where to write hardly a man, and then, I do know, <sup>they</sup> will do as you advise. I have written to no one except Baldwin, yourself and Palmer. Have merely acknowledged receipt of other letters and thanked them for their interest &c. I know every one now will support me if possible, therefore it is bad policy for me to be blowing my own horn."

On May 4, 1866, I wrote Mr. Frank Palmer the following letter:

Ft. Leavenworth:

"I have neglected writing you hoping that something would turn up to convince my friends that it was not best to place me on the track for Congress. I, however, after so much urging from all parts of the district, wrote Cale that if nominated I would accept, but that it must be clearly understood that my railroad engagements were such that I could not be in the District this summer or fall; that I could not canvass the district, not being a public speaker; and, lastly that I was a radical and would not support Johnson's Reconstruction Policy, and had no half-way opinions on any of these matters; that everybody knows, and with this, I told him that I would abide by whatever my friends said, leaving the matter entirely in his hands.

Now, I do not believe Kasson can be elected, and I did not suppose he would ever be a candidate. He is the last man I would want to injure, but I give away my principles, political or moral, to no man, and we all know that Kasson's personal difficulties will be used in the canvass, with all the addition that such things can easily have; also that other matters connected with him will come to light. In the face of such a record, a large number of staunch Republicans will stay away from the polls rather than vote for him.

It appears to me the party should have taken up some active young man, a speaker, who seeks honors in Washington, and who could devote all his time to the fight; this would suit me. But, as I have heretofore said, I leave the matter with those who should know what is best to be done, and shall abide by their decision; they will understand my position.

I would like to hear from you. My arrangements for the future were made before the matter came up. I can't get out of them, and I do not suppose, even if nominated that the District would want me to. I take entire charge of the U.P.R.R. from top to bottom, and we will crowd it. Not only that, but we shall have a very decided say in the roads coming across Iowa, and in that position I can do more for my State than in any other.

Tichenor wrote me to go to work and write my friends. It is useless for me to do that, as I am away from you all and might kick over any of your plans. I shall therefore write to no one, unless to particular friends. Hoxie will do all he can. He cannot get away, but can write. It appears to me the moral sense of the people of the district should decide that Mr. Kasson is ~~wrong~~, I cannot endorse his views; it seems others do, as I have told you I intend to do. I know that every moment spent by any man in trying to head the breach with Johnson, is so much time thrown away, while he, (Johnson) is endeavoring to build up a party of his own, hopes to bring to it all the rebel element in the country, and as many more as he can who regard office rather than principle.

(5)

On May 11th 1866, I received the following letter from Mr. F. W. Palmer who was at that time editor of the Register and Leader, the leading Republican paper of the State of Iowa:

Des Moines, Iowa.

"Until the receipt of a recent dispatch from Judge Baldwin and your letter of the 4th, which reached me yesterday, we had labored here at some disadvantage. It is all clear work now, and we shall work with some system. Kasson relies in all the counties entirely upon the old politicians. A new generation of political workers can be put to work quietly, who, from their military knowledge of, and association with you, can make up the delegations in nearly all the counties. The Kasson men had the Dist. Com. in their own hands, and called the Convention at the very place I would have selected. The delegates to the State Convention from outside of this Dist., will be all on our side, and their influence will not be insignificant. We are all in for the war now, and we do not any of us make a practice of being whipped."

On the same date I received the following from Mr. E. C. Blackmer who was a personal friend living at Des Moines:

"When I left here (march 12th) it was rather early to commence talking on the subject of Congressman, but as I had heard several names mentioned as probable candidates, of course, I could but talk of their merits wherever I went. At that time I believe it was not known that you had consented to become a candidate, but for some reason, there seemed to be a foregone conclusion that you would be, and hence the subject was seldom broached without your name being mentioned. Mr. Harvey was a candidate, but has now withdrawn his name. He told me when I met him in the South-western part of the State, on the 14th of April, that he did not know whether or not you would be a candidate, and if not, he should be and would not fear any one in the canvass, but said he would not run against you. I told him frankly that I had observed through the counties I had been in, a general desire for you to run and that he would be wise to withdraw in case you did. He headed the admonition and has drawn off.

General Glasgow was the first man spoken of, that I know of, and as he boarded at my house during the session, I had a good chance to find out his feelings on the subject. He was anxious to run provided he had a clear field, but told me he would not if you were a candidate, but would give you his influence. When I saw him last at his home in Wayne County (the 7th of April) he had not heard that you would accept and was beginning to look the ground over, himself. I told him what I thought about his chances—that he was not very well known through the District, &c. &c. but promised to mention his name through the district, and let him know the feelings, &c.

I mentioned his name and Harvey's and yours in all the counties, but soon learned that you were the choice and that if you accepted there would be no use for them. On my return trip I began to hear Kasson's name mentioned and found that he would be a candidate for re-election. He has been writing to all the leading men in the district recently and claims it as a right, for his past services and in view of several measures which he has been maturing for some time. I don't know what effect his letters will have, but I found in one or two counties considerable feeling his favor. Since my return I have understood that General Glasgow is still a candidate and I conclude that he has not heard that you would be in the field, for he certainly told me he would not be against you, and I gave that assurance to those with whom I talked on the subject throughout the district. I have written him that, from what I have seen and heard, he should withdraw and go in for you, and if nominated take

(6)

the stump for you. I have not heard from him yet but hope he will not be so foolish as to continue the fight. I have travelled through the district every three or four months for the past two years, and have become intimately acquainted with the leading Republicans - the County officers, nearly all the lawyers and many of the merchants and other business men - and I think I can come as near as any man in the district of telling what the feeling is on the question of Republican to Congress.

Within the next two weeks I shall write to a large majority of the Counties in the Dist., and get the present opinions and apparent references of the leading men, and if you desire will communicate the information I obtain."

Mr. Lewis W. Ross was selected by my friends to manage the campaign in my absence and he received letters from all over the district and the State, some objecting to my running for Congress; that they desired to run me for Governor, but most of them offered their services to him to aid all they could in my nomination. These letters are too numerous to copy but they showed such a friendship for me that when Mr. Ross presented them to me, they made a great impression upon me. The soldiers in the district who had served with me, or had served in the Army, came to me unanimously.

Unfortunately, I had delayed the acceptance of the candidacy until Mr. Kasson had made arrangements in most of the Counties for delegations for him and the Republicans in nearly every county had to go to work and undo his work, which, in some cases, was very difficult.

<sup>1866</sup> On June 26th Mr. Hoxie wrote me about attending the Convention, stating that "he feared it would not do any good." He said, "In the first place all the County Conventions are, or will be held this week, and Kasson's friends have packed them. I will make an even bet that he carries Polk County. I have a letter from Fremont in which it is intimated that Kasson has the county. Were I to go home, I do not believe I could now change the game. Palmer, Tichenor and Withrow have not fixed up County conventions as they should; that is, the trouble and is what will nominate Kasson."

This letter was in entirely a different tone from all others that I had received. Mr. Hoxie was not in the District, but was working on the Union Pacific Railway and I think Mr. Durant's desires not to have me run or elected influenced him in what he said, but it was too late then, for before I had accepted, I had communicated with Mr. Durant and he thought it would be a good thing for the Company to have some one in Congress who was thoroughly posted on the Union Pacific and that while I was attending the sessions, I could take care of the work on the road through my subordinates. This letter influenced me greatly in my decision but I learned after I had become a candidate, and before the nomination,

(7) that Mr. Kasson's friends had made great pressure upon the company to prevent my running and that that influence had had considerable influence weight with them, but it was to lead them to make me change.

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Although I was absent from the District, I was receiving personal letters from every County, all of which assured me that I would be nominated.

On May 28th, 1866, I received the following letter which Mr. William Hartshorn had written to Mr. Kasson:

"In your debate with Mr. Price you say that your cause was sustained by your constancy last fall. I feel that I should be unworthy the kindness and friendship you have always manifested for me, if I did not inform you that as far as this county is concerned, if a convention were called tomorrow, any one who endorsed your cause could not get twenty-five out of the five hundred and fifty votes cast by the Union men last fall. The frankness with which I make this, to me painful statement, will, I think, convince you that I entertain for you a sincere friendship. I do not know what the sentiment of the District is on questions of the day, but I do know, that the Republicans of this country are a unit in their support of Congress and in requiring security for the future before admitting rebel congressmen from the rebel states. The feeling against your course since you wrote your letter from the west, to the electors of the 5th dist. has been such as to cause me great pain. I, as chairman of our Gen. Com., have been requested by many to call a public meeting to give expression to that feeling but have put them off, telling them that I had faith to hope and believe that all would yet be well. I make this statement as a matter of fact, not for the purpose of influencing your course in any way, much less to raise a controversy; my object is as one who entertains for you a more kindly feeling than for any other public man to fulfill the duty of a true friend and speak the truth however painful."

1866  
On May 30th, Captain J. R. Reed who had been commander of the 2nd Iowa Battery, known as Dodge's Iowa Battery, wrote me as follows from Dallas, Iowa.

"Your favor of the 28th is received. I have felt the importance of a change in our representative in Congress. This district is certainly as radical as any other in the State or Country and we want a man to represent us on whom we can rely, one on whose actions we can look forward to with confidence and not one whose record is only known where the journals are made up and half the time on the wrong side. We want a man with courage and firmness enough to do the right under any and all circumstances. I am heartily glad you have consented to the use of your name and shall do what I can to effect your nomination. The delegates from the county have been already appointed. They were appointed in my absence and by a convention gotten up by Kasson's friends, and it is understood that they are for him. Some of them, I think, will vote otherwise, when they understand the true state of affairs. I will be at the convention and will do what I can to prevent the re-nomination of Mr. Kasson as I think his record is bad and that he has not the normal courage for the position."

I was very much disturbed about the personal matters which were coming in about Mr. Kasson. Mr. Kasson had had differences with his wife and her brother, Dr. W. G. Elliott, of St. Louis, opened up the question by writing letters. On June 1st, he wrote me as follows:

"Press your claims vigorously and let Hoxie tell all he knows about Kasson. I wrote Palmer for publication, a plain recital of facts, signed by name and offering to visit Des Moines with all the original documents. If Palmer does not publish it, Withrow has positive directions to do so, in the most public manner. Unless I am mistaken a strong protest against his nomination will come from the leading men in Washington. You see I have declared war to the knife."

As soon as I received this letter, which was sometime after it was written, I immediately communicated with my friends to take no part in the matter and not to publish it, but it was impossible to keep such a matter secret, and I think the attack instead of hurting Mr. Kasson helped him; however, he was aware that I took no part in it.

<sup>1866</sup> Gen. J. A. Williamson, a prominent democrat On June 4th, the Adjutant of my regiment, who afterwards became its Colonel, wrote me from Ft. Smith as follows:

"Dear General: I see by the State Register that you will probably be a candidate for Congress in place of Kasson; I hope this may be true. The 5th District needs some man of radical views to represent it. Kasson has gone over. For God's sake and the sake of loyal men, run for the office. If you get the nomination, I will go to Iowa, and do all that I can to make your majority such as to teach every body that we want a man both loyal and radical.

I am staying here in this Paradise of traitors, because I can make a living by it, but it is worse than banishment and as soon as I can do better, I will."

On June 4, 1866, Mr. M. L. McPherson, who was talked of as a candidate in the District, wrote me from Winterset as follows:

"I received your favor of the 28th ult. yesterday; I was absent when it arrived; hence, the delay in answering it. I certainly want no strife between your friends and mine in the approaching convention. I am dissatisfied with Hon. John A. Kasson's course in Congress, and hence I am a candidate for the place he now fills; I was induced to become a candidate by some of my friends urging me forward. Since then these friends are reported to be for you, believing you to be the strongest man against Mr. Kasson.

My object in being a candidate was to get to Congress, and not to defeat any particular man, but to defeat in Convention, by honorable means, all opponents. For that I am still struggling and will struggle until I find there is no chance for me, then my friends will, of course, select the man they think will most correctly represent their sentiments at Washington. I am of the most radical school of Republicans and my friends will select a radical if they fail to nominate me.

Mr. Kasson seems to be carrying everything his own way in Polk, Dallas & Guthrie Counties. This County and Warren will be against him I think. In the other adjoining counties, I cannot tell certainly what will be done. He has the advantage of federal patronage and is here himself, and working very hard. His renomination would be regarded as a triumph for Andy Johnson, outside of this State, and is what I would very much regret to see."

On June 7th I received a letter from Mr. Tichenor stating that Polk County had put up a delegation against me. He said, "The delegates in this county are "bad eggs"; three of the men are outright copperheads, and for that reason should not be permitted to hold seats in the convention. One of them is C. J. Clark who was one of the editors of the "Possum Campaign Scout" that was published here last fall."

On June 9th, 1866, Comrade A. H. East of Page County, wrote me the following characteristic letter:

"At two o'clock this A. M., we formed in battle line and commenced skirmishing on the enemies' left. By three P. M. the engagement became general, which continued about an hour, during which time General Moore fell mortally wounded, and in twenty minutes Gen. Lawrence was carried from the field a lifeless corpse. Surgeon Van Sant in attempting to render medical aid to Gen. Moore received a severe wound in the head by the bursting of a shell. At this juncture, we moved on the enemy's main works which we carried in about five minutes, when a white flag was raised and the enemy surrendered on the following terms: That Page county stand pledged to support G. M. Dodge for Congress at the ensuing election. This endorsed by fifty votes against nineteen.

Our delegates are Felch-Hinchman, J. Cramer, Dr. Saddler and McIntire, that being the number to which this county is entitled."

I had word from Warren County that the Dodge delegation had carried it ten to one.

On June 18th, 1866, the convention met at Des Moines. I was present and the contest in the convention was a very excited one. The Iowa State Register, June 19, 1866, gives this account of the proceedings: The Republican Congressional Convention was called to order at 2 o'clock, on the 18th inst., by Seward Smith, Col. Dungan of Lucas County called to the Chair on temporary organization.

On motion, Mr. J. W. Kennedy of Clark and John Y. Stone of Mills, were elected Secretaries.

Major Mudgett of Decatur introduced the following resolution; Resolved, That a Committee of seven, to consist of the following named gentlemen, be appointed on permanent organization, to-wit:

Dr. Ballard of Audubon, Mr. Maxwell of Guthrie, Dr. Brooks of Polk, Mr. Hartshorn of Wayne, Mr. McIntyre of Page, Mr. Murray of Madison, and Mr. Swan of Warren.

On Motion, the Chair appointed a Committee on credentials to-wit:

J. N. Cornish of Fremont, B. F. Murray of Madison, J. P. Finley of Decatur, E. T. Smith of Taylor, and Col. S. D. Nichols of Guthrie.

On Motion the Chair appointed a committee on permanent organization, to-wit:

W. G. Kennedy of Clark, Hoyt Sherman of Polk, Col. P. P. Henderson of Warren, W. F. Sapp of Pottawattamie and E. D. Edginton of Lucas.

The Committee on permanent organization beg leave to recommend the names of the following gentlemen as permanent officers of the Convention.

1121 9

For President--Col. P. P. Henderson of Warren County.

For Secretaries--W. G. Kennedy of Clark Co., John Y. Stone of Mills Co., and E. W. Fuller of Madison Co.

The Committee on Credentials have the honor to report the following as members of the Convention;

Adair--W. F. Edginton, A. P. Lyttleton, A. Rutt 3 votes.

Adams--D. V. Stevenson, H. G. Ankeny, F. M. Davis, 3 votes.

Audubon--S. M. Ballard 2 Votes.

Cass. D. A. Barnett, M. B. Darnell and F. H. Whitney 3 votes.

Clark--H. C. Sigler, W. G. Kennedy, Thos. Parrish, Wm.

Prior, E. M. Lairs, Jno. Chaney, and Luther Millard, 7 votes.

Dallas J. T. Caldwell, Mat Madron, W. G. Vanmeter, Harvey Willis, Isaac Thornton, M. J. Marshall, L. Bingham, and L. B. Hempstead, 8 votes.

Decatur--J. P. Finley, Maj. G. C. Muggett, Maj. J. L. Young Sam'l Forrey, Jesse Roberts, A. B. Starns, R. W. Mansfield, Lt. J. C. Gamble, 8 votes.

Fremont--Col. J. N. Cornish, John Todd, E. S. Hedges, H. H. Wilson, E. S. Hill, A. R. Anderson, A. Altematz, G. V. Swearingen, J. L. Mitchell, J. A. Harvey, and J. Foeller, 11 votes.

Guthrie--T. E. Harlan, Wm. Maxwell, Capt. Thos Seely, S. D. Nichols, Capt. Jno. P. McEwen, 5 votes.

Harrison--W. C. Ellis, J. H. Smith, J. H. Rice, Jno. C. Willis, Phineas Cadmer, 5 votes.

Lucas--E. B. Woodward, P. M. Stewart, E. E. Edwards, W. S. Dungan, E. T. Edginton, V. B. Gardner, John Weirick, 7 votes.

Madison--J. J. Hutchins, Wm. Anderson, M. R. Tidrick, S. G. Ruby, W. C. Newton, B. F. Murray, E. W. Fuller, J. M. Brown, Jno. A. Pitzer, S. B. Cherry and W. C. Storrs, 11 votes.

Mills--J. W. Cooledge, H. A. Copeland, C. E. Millard, Wm. Hale, J. Y. Stone, and Geo. W. Davis, 6 votes.

Montgomery--J. B. Packard, Wm. Dunn, Jno. Shafer, 3 votes.

Page--Maj. Jos. Cramer, J. R. Hinchman, J. I. Mackentyre, Isaac Felch, and Dr. Saddler, 3 votes.

Pottawattamie--W. F. Sapp, L. W. Ross, Wm. Armstrong, E. F. Burdick, J. W. Morse, and Wm. Lyman, 6 votes.

11.21 B.

Polk--B. F. Allen, Hoyt Sherman, J. F. Hatch, G. A. Stewart,  
Seward Smith, E. M. Mills, E. R. Clapp, A. S. Vorse, T. K. Brooks,  
M. H. King, Wm. Matthews, J. C. Jordan, N. R. Kuntz, C. J. Clark, A.  
Elliott, B. Hawley, F. Plummer and J. W. Burgett, 18 votes.

Ringgold--W. T. Laughlin, M. R. Turk, D. B. Marshall, and  
G. W. Beck, 4 votes.

Shelby--M. H. Adams, and H. C. Holcomb, 2 votes.

Taylor--Daniel Underwood, Jasper D. Hoover, Robert Reed, Capt.  
Jno. Flick and E. T. Smith, 5 votes.

Union--V. E. Davis, Ira Seely, and N. W. Rowell, 3 votes.

Warren--Geo. E. Griffith, Geo. M. Irvin, P. P. Henderson,  
Jno. Morrison, Newton Guthrie, L. S. Spencer, E. W. Hartman, B. S.  
Noble, J. T. Lacey, David Holland, Wm. Ashworth, J. F. Goolman, 13 votes.

Wayne--Wm. Hartshorn, Jno. Hays, B. S. Jones, J. Prugh,  
Wm. Miles, Gen. S. L. Glasgow, H. Evans, 7 votes.

S. D. Nicholas, Chairman.

The Convention then proceeded to ballot for candidates, for whom there were J. A. Kasson, of Polk, G. M. Dodge of Pottawattamie, M. L. McPherson of Madison, and J. A. Harvey of Fremont. On the first ballot, Mr. Kasson led Gen. Dodge three votes. With the exception of a brief interval, the balloting was continued until 10 o'clock last night, and no choice. Mr. Harvey's name was withdrawn, and on the 77th ballot, which was the last of the series for yesterday, Mr. Kasson had  $56\frac{1}{2}$  votes, General Dodge  $44\frac{1}{2}$ , and Captain McPherson 39, Adjourned to meet this morning at 9 o'clock.

Wednesday June 20, 1866.

The following is the conclusion of the report of the proceedings of the Republican Congressional Convention as furnished us by one of the Secretaries, Mr. Stone of Mills County;

On motion, the report of the Committee on Credentials was received and adopted.

Col. Henderson then took the chair.

Col. W. F. Sapp of Pottawattamie, introduced the following resolution, which on motion, was adopted.

Resolved, That this convention now proceed to ballot for a candidate for Congress for the Fifth Congressional District, that the

roll of the Counties be called, and that the chairman of the delegations from the several counties announce the votes of their respective counties; that the first ballot be informal, and that the balloting be continued until some person shall be nominated.

Convention then proceeded to ballott for Congressman.

After balloting 44 times, without an election, the last ballot standing Kasson  $51\frac{1}{2}$ , McPherson 23, Dodge  $53\frac{1}{2}$ , Harvey 12, the Convention adjourned till  $7\frac{1}{2}$  p. m.

Convention met pursuant to adjournment--Balloting recommenced, and continued to the 59th without an election, when Mr. J. A. Harvey's name was withdrawn from the contest,--Balloting continued to the 77th time without an election, the last standing Kasson  $56\frac{1}{2}$ , McPherson 39, Dodge  $44\frac{1}{2}$ , when the convention adjourned till eight o'clock to-morrow morning.

Convention met pursuant to adjournment,--Balloting recommenced, the 78th standing,--Kasson 64, Dodge 76.

General Dodge was declared duly nominated.

On motion of Seward Smith of Polk, the nomination was made unanimous.

On motion the Chair appointed a committee to wait on the Candidate and inform him of his nomination to-wit:

W. F. Sapp of Pottawattamie, Hoyt Sherman of Polk, and Col. Nichols of Guthrie.

On motion the Chair appointed a Central Committee of the 5th Congressional District for the ensuing two years, to-wit:

G. F. Kilburn of Adair, A. A. Ransom of Adams; A. J. Halleck of Audubon; M. B. Darnell of Cass; W. G. Kennedy of Clark; M. Madron of Dallas; Dr. J. P. Finley of Decatur; Col. J. H. Cornish, of Fremont; W. Maxwell of Guthrie; T. Caldwell of Harrison; E. R. Woodward of Lucas, E. W. Fuller of Madison; J. C. Stone of Mills, W. W. Merrit of Montgomery; Jas. S. McIntyre of Page; L. W. Ross of Pottawattamie; Seward Smith of Polk; I. W. Keller of Ringgold; Thos. Wood of Shelby; J. H. Turner of Taylor; N. W. Rowell of Union; Geo. E. Griffith of Warren; S. M. Glasgow of Wayne.

On motion the Convention adjourned siue die.

P. P. Henderson, Ch'n.

W. H. Kenedy,	)	
Geo. L. Stone,	)	Secretaries.
E. W. Fuller,	)	

1121 D.

I was nominated on the seventy-eighth ballot and was called before the convention and I made a short impromptu speech. Mr. Renerick of Burlington, Iowa said of it.

"Allow me to congratulate you on your nomination. I have heard many of our most prominent men say that they admired your short speech of thanks to the delegates; that it was admirable, covering all and was right to the point. It was far more satisfactory than a great long address delivered to be printed and to be criticised hereafter by the opponents. You will no doubt be elected by a large majority."

The Newspapers over the state and in the District took notice of the convention and were all very complimentary of me. The Des Moines Register, June 20, 1866, commenting on my nomination said:

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1852/3/4/5*  
"A SOLDIER FOR CONGRESSMAN.

A. Republican Congressional convention for the 5th district which assembled in this city on the 18th instant, nominated Gen. Grenville M. Dodge of Pottawattamie. His name has never been presented for an elective civil office, but on account of the invaluable services which he rendered in the field throughout the late war, and as a recognition of the ability he has displayed in executive administration, his friends were anxious that he should be the Republican nominee in Congress in this district. The contest in the convention was protracted; but the universal judgment now is that the choice was an extremely wise one, and that it will add strength to the republican cause in the canvass of the present summer throughout the entire state.

General Dodge is one of the best types of a self-made man in the West. He is a native of North Danvers, Mass., and was educated at Norwich University and Partridge Military Academy in Norwich, Vt. At the age of 19 years he started for the west with just about enough capital to pay his traveling expenses to Chicago. He found employment as a civil engineer on various Illinois railroads for about a year, when he obtained the position of assistant engineer on the Mississippi & Missouri Railroad in Iowa. He made the preliminary survey of that road from the Mississippi to the Missouri, and in 1854 established his permanent residence at Council Bluffs. He engaged somewhat in mercantile and banking pursuits but he devoted much of his time to the interests of the Mississippi & Missouri Railroad and rendered valuable aid in promoting the general railroad improvements of the state. It was owing greatly to his instrumentality that the munificent land grants were secured for Iowa. At the very commencement

11216.

of the rebellion he tendered his services to the governor and was sent to Washington to secure arms and equipment for Iowa Troops. He met with more success than could have been anticipated and under special authority of the Secretary of War raised the Fourth Regiment of Iowa Infantry, and Second (Dodge's) Battery, and was commissioned colonel of the former. His first campaign was made into Missouri for the banishment and expulsion of the rebel leader Poindexter, who with a large force threatened the southern Iowa border. He accomplished the object of his march and returned to Council Bluffs, completed the organization of his regiment and battery and proceeded to report with them to Gen. Fremont in Saint Louis. He was then ordered to Rolla, where he was assigned to and commanded that post until the army of the Southwest under command of Gen. Curtis was organized, and then Col. Dodge was assigned to command the First Regiment, Fourth Division of that army. Two expeditions under his command were made, one to Houston, and one to Salem, during which two engagements occurred, in one of which Col. Dodge was severely wounded. He had the advance army of the Southwest at Springfield, Mo., when that place was captured. He also led the advance of that army in the pursuit of Price, and took part in the engagements of Cane Creek and Sugar Creek. He defeated the rebel Gates' command at Blackburn's Mills, and commanded on the right at the battle of Pea Ridge. His troops were engaged constantly during the entire battle, losing one-third of the men lost from the entire army. In this battle he was dangerously wounded in two parts of the body, and had three horses killed under him. Notwithstanding his wounds, however, he remained on the field with his command until the battle was over, and was then sent to Saint Louis in charge of a surgeon. For his gallant conduct at Pea Ridge he was immediately promoted to the rank of Brigadier General. On his recovery he reported to Gen. Halleck and was assigned to command the post of Columbus, Ky., and superintended the reconstruction of the Mobile & Ohio Railroad. Thence he was transferred to command the Central Division of the Army of the Tennessee, with headquarters at Trenton. While here he completed the M. & O. Railroad to Humboldt, Tenn., and built Stockades and earth-works at all important bridges and stations. He captured Dryersburg, Huntington and O'Brien and defeated the rebel General Millipigue on

1121 J.

the Hatchie river. From this point he was assigned to command the District of Columbus, Ky., and from there was assigned by Gen. Grant to command the Fourth Division of the Army of Tennessee, and the District of Corinth, Miss. While here troops under his command made rapid and successful expeditions into Tennessee and Alabama, in one of which (into North Alabama) they defeated the forces of the enemy under Forrest and Roddy at Bear Creek, Burton Station, Cherokee, Tuscumbia, Leighton, and Town Creek. On the return from his march the rebel forces under Ruggles and Chalmers were attacked and badly whipped by the cavalry near Tupelo, Miss. In July, 1863, Gen. Dodge was assigned to command the left wing of the 16th Army Corps with headquarters at Corinth. While in this command he met and defeated Gen. Roddy at Jackson, Tenn., captured Grenada, Miss., and repelled attacks of Gen. Chalmers, Ruggles and Gholsen. During Gen. Sherman's advances toward Tuscumbia enroute to Chattanooga a portion of Gen. Dodge's cavalry made an expedition to Elyton, Ala., as a diversion in favor of Gen. Sherman. This force met the enemy under Gen. S. D. Lee, at Vincent's Cross Roads, Ala., and after a severe battle was forced to retire with a severe loss, the enemy being in overwhelming force. During the greater portion of the time Gen. Dodge commanded at Corinth he held the line from Bear Creek, Ala., to Grand Junction, Tenn., protecting the greater portion of west Tennessee and North Mississippi, rebuilt the Memphis and Charleston Railroad from Iuka, Miss., to Grand Junction, Tenn., raised the First West-Tennessee Cavalry, the First Alabama Cavalry (white troops), completed the organization of the First and Second West Tennessee Infantry (colored) and organized several companies of colored troops for heavy artillery. He cooperated with Gen. Sherman in the movement for the relief of Chattanooga, and as commander of the left wing of the 16th Army Corps he joined the army of Gen. Sherman and was given the advance Army of the Tennessee in its celebrated flank movement at the opening of the Atlanta campaign. By rapid marches and vigorous movements he seized successively Gordon's Gap, Ship Gap, and Snake Creek Gap, and moved boldly on Resacca, placed himself in the rear of the Army of Johnson, compelling that General to evacuate his stronghold at Dallas and fall back in retreat toward Atlanta. At Resacca, Lay's Ferry, Rome Cross Roads, Sugar Valley,

1121 G.

Nickajack Creek, Roswell Bridge, Cross Keys and Decatur his gallant corps was alone and won unfading laurels, while at Resacca, Dallas, New Hope Church, Kennesaw Mountain, Chattahoochee, Atlanta, his command bore an honorable part. He was on the extreme left of the army in the great battle of July 22nd in front of Atlanta, in which McPherson fell, and for a long time with his little corps he bore the brunt of the conflict, and by stubborn resistance and heroic bravery hurled back the advanced columns of an enemy outnumbering him three to one and confident of success. In front of his 11th Regiment which held the left, he took prisoners from 49 regiments, representing two corps of the enemy. Against this odds he not only held his ground, drove the enemy with terrible slaughter, but also detached an entire brigade to assist the 15th corps (Gen. Logan's). On the 19th of August, 1864, while superintending an advance of his front line then besieging Atlanta, he fell dangerously wounded by a gunshot in the head. As soon as he was able to be moved he was sent north, where he remained until he recovered his wound. He then reported for duty to Gen. Sherman, but being deemed physically unable to take part in the March to the Sea, he was ordered to the command of the District of Vicksburg. While enroute on this command he was assigned by the president, upon the recommendation of Gen. Grant, to the Department of Missouri, relieving Gen. Rosencrans. This department had up to this time been literally a slaughter pen for its commandants. Fremont, Hunter, Halleck, Curtis, Schofield, and Rosencrans had successively gone down under the difficulties of the position, until the popular idea was that disgraceful failure was an evitable accompaniment of that appointment to the command of that department. Gen. Dodge demonstrated that there could be an exception to this rule, for while his responsibilities were greatly increased by the addition of the Department of Kansas and of Utah, consisting of Kansas, Nebraska, Colorado and Utah and the Department of Missouri, his administration was accepted with the utmost satisfaction by the people of the department and by the president; law and order having been more thoroughly established under this rule than at any previous period since the commencement of the war. Then the presidential order organizing and reducing the departmental commands was issued, Gen. Dodge turned over his department to Gen. Pope and was

1121 H.

assigned to a general command embracing Kansas, Nebraska, Colorado, Western Dakota, Montana and Utah, including all the U. S. forces operating against the Indians on the plains. He administered the duties of his position until about the first of the present month, when at his own urgent request his resignation was accepted and he returned to private life.

Such are some of the vents in the life of the man whom the republicans of this district have selected as their congressional nominee. He is only 34 years of age, yet by his own unaided efforts he has won his way to the front rank of military commandants and executive administrators, and the record of his services during the last five years is the proudest honor which the state can claim for any of its sons. President Lincoln on one occasion said "Gen. Dodge has been more strongly recommended and his promotion more persistently urged by his superior officers than any other man I have made Major General." His endorsement by the people at the polls next October will be just as full, and when he shall take his seat in the lower house of congress, no member of that body will excel him in faithful and efficient devotion to the interests of his district, state, and nation, and no member will rise above him in bold, consistent adherence to the principles of liberty and equality for which the radical republican majority in congress are struggling, in opposition to a treacherous executive and northern and southern rebels."

My home paper, Council Bluffs Nonpareil, on receiving news of my nomination made the following comment:

"It will be seen from our special dispatches that the contest was long and obstinate- but the result is none the less glorious.

The Republicans of the Fifth Congressional District will recognize in the nominee of their party a man of whom, not only they, but his country has reason to feel proud. His own immediate fellow-citizens know him, to love and respect him. The purity of his private life, and the patriotism which prompted and the recognized ability which characterized his military career have endeared him to all who know him.

His soundness upon the political question of the day even his traducers have not dared to question and his open political enemies will not dispute. His patriotism has been demonstrated on a theatre where his country became the judge of his fidelity. Modest, unassuming and retiring, Gen. Dodge is eminently a man of the people; the unfaltering friend of their interests, and the tried patriot of his country. When this contest upon which we are now entering, shall have ended, and victory shall have perched upon the banner which has this day been entrusted to his hands, the people of this congressional district, irrespective of party, will be convinced that their interests could not have been placed in better hands than his, or found a truer

1122

friend than Gen. G. M. Dodge."

The Omaha Republican, which was at the head-quarters of the Union Pacific Railroad, commented as follows:

"Information has been received here today of the nomination of Gen. Grenville M. Dodge, for Congress, by the Republican Convention, which met at Des Moines, Iowa. There is a universal feeling of gladness among our people, with whom the General is a great favorite, on account of the compliment paid by the people of his district to true merit and ability. At the same time while all are proud and glad of this recognition of the eminent services of a patriot and soldier, there is a general expression of regret at the certain prospect of the loss of the General's services and society on this side of the river. The people of the territory, and particularly those of Omaha, realize, however, that Gen. Dodge is only a sojourner among them; and they do not despair of his active co-operation in any just measures which would enure to the benefit of his own home and district, as well as to that of his territory.

We feel that it is unnecessary for us to speak at length at this time of Gen. Dodge's career as a military man. It is a matter of history, and is familiar to the people, not only of the West but of the nation. It is well known that he is not indebted to favoritism for his rapid promotion in this line, but rather to natural ability, his integrity and untiring devotion to the cause. The same may be said of his application and success in civil pursuits. It is a rare thing that a man of such unobtrusive, quiet manners, is taken up unsolicited for an important office."

Comments of the Chicago Tribune:

"A good story is in circulation about General Dodge, Republican Candidate for Congress in the Fifth, Mr. Kasson's district, which though it may neither be new or true is worth repeating. It seems that while Gen. Dodge was in command at Corinth, he enforced the Treasury regulations forbidding intercourse with the enemy, with a vigor that was very unpleasant and probably unusual to the Jews who were assembled there to buy cotton. Acting on the principal that every man has his price, they commenced plying the General in their well known way. First they offered him \$50,000 in gold, then \$100,000, then \$150,000 and finally \$200,000 in gold if he would but open the lines and let cotton come in and rebel supplies go out. At this dangerous crisis, the General Telegraphed forthwith to General Grant to remove him immediately from his command—that he had been offered \$200,000 in gold to violate his orders, and that was so near his price that he was afraid the next offer would bring him, so that he wanted to be relieved immediately. If this is true, the General is just the man wanted in Congress at this time. He will find plenty of cotton traders there ready to bid cash for him; and it is to be hoped that he will resist them as steadfastly as he did the Hebrews at Vicksburg. Of a very different stamp is his opponent, the notorious Gen. Tuttle, who, oddly enough, was in command at the very same post, Vicksburg, and who, it is very certain, never sent any such dispatches to the Department.

He is the same individual who failed, while in the army of 1863, of beating Gov. Stone, the present incumbent by only some 30,000 votes candidate for Congress in 1866."

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(11)

The Council Bluffs Nonpareil gave the following interview  
with General Sherman:

"A correspondent in Omaha, Nebraska, who happened to be at the Herndon House in that city, and to be a listener to a public conversation at the dinner table between Gen. W. T. Sherman and Gen. G. M. Dodge, sends us a report of the conversation, as nearly as he could recollect it, as follows:

General Sherman: - Well, Dodge, you are running for Congress?

General Dodge - "Yes.

Gen. Sherman. - I am sorry. You have enough to do without going into politics.

Gen. Dodge - That is true, but the people of this district seem to think differently, and I am willing to sacrifice my personal feelings and interests for the purpose of aiding the success of principles for which we fought.

Gen. Sherman. Who is your opponent?

Gen. Dodge - General Tuttle of Des Moines.

Gen. Sherman - What? Tuttle? Well, if you do not beat him, you ought to be taken out and whipped.

Dodge: - Did you ever know the Sixteenth Corps to go in without winning?

Sherman: - No.

Dodge: - Well, it is in the fight over the river in the Fifth Congressional District.

Sherman: - Well then it is all right.

Our correspondent says the conversation was in no manner private or confidential, and as there were many interested listeners, he feels fully authorized to send the report to us."

It was known that I had to leave the district right after the convention and the Republicans demanded that I should give a statement of my views before I left, and I visited Harrison County and made a short address, which the local paper there quoted as follows:

"The Mass Meeting which was held in the Court House Harrison County on Saturday last was well attended, being the largest of any meeting of a political character ever witnessed in the County. The utmost harmony and good feeling prevailed. General Dodge was loudly called upon to make a speech (he being present) and being introduced to the audience, spoke as follows:

Gentlemen and Fellow Citizens: - Since it is your earnest desire that I should speak to you on the present occasion on the political issues of the day, permit me to assure you, at the onset, that speech making has not been my past mode of life, but that since my coming to your beautiful and rapidly growing State, my time and efforts have been spent in a different direction - that of engineer of railroads, until the breaking out of the Rebellion, at which time I among the first of Iowa's Sons to enter my name upon the list as an enemy to those who were seeking to overthrow the Government of the United States. I have nothing to say of my history or acts since that time; the same is familiar to each of you. I have only done my duty as an American citizen, as one who loves his country more than party and in the discharge of that duty, I have ever aimed at justice and right regardless of consequences.

A political struggle, rarely surpassed in importance and intensity, has been precipitated upon the country by the treachery of Andrew Johnson and some of his adherents, to the great and patriotic party by which they were placed in power. The aim of this treachery is to turn over this Government into the hands of the rebels and their sympathizers - and placing under their soldiers the best and bravest men of the North whom they hate and curse as responsible for the most unexpected overthrow of their darling confederacy. The payment of this treachery, is a promise of support from the South of Andy Johnson for their next President.

(12)

Andrew Johnson stultifies himself and goes back on all his past sayings and record, or their mere promise. I have heard Andy Johnson declare that no leading rebel should be allowed to participate in the Government of the country again if he could help it. He has declared time and again that treason should be made odious. When the rebellion closed, he paced back and forth in Lincoln's ante-room, three hours just before Lincoln went to Richmond, for the purpose of seeing Mr. Lincoln and (as Mr. Johnson expressed it) keep him from being too lenient with the rebels - the people would not stand any such policy. Finally his speeches threatened annihilation to traitors, confiscation and disfranchisement. After he came into power, he prescribed the rules by which the rebel state might apply to come into the Union, not by which they might come in, for he distinctly stated that they could not come in except by permission of Congress.

These terms were - the adoption of the Constitutional Amendment - the declaring null and void the Ordinances of Secession - the repudiation of the rebel debt, and finally the conformity of their laws and ordinances to the Constitution and laws of the United States. A part of the States complied with this demand, but only one or two fully. Some refused one thin g some another, and upon President Johnson's own conditions there were not over two states that could be admitted. He also informed them it would be useless for them to send up to Congress any except Loyal Representatives, and of all those elected from the south there was not a dozen who had not take an active part in the rebellion.

Congress saw the result of the President's attempt to reconstruction and proposed that the loyal men should be admitted to representation in Congress when they adopted, by amendment to the Constitution of the United States, the terms proposed by President Johnson, and the additional one that representation in the United States should be based upon the voters thereof. We demand that the cause we fought for shall be held sacred, and that loyal men shall assert their rights, and prescribe the rules by which Rebels shall again take part in this Government. And we also demand that the south shall no longer hold up to us that one white man in South Carolina is equal to three white men in Iowa. We believe, we thought that we showed them that we are at least equal in the war, and we are determined we will be after it is over.

Therefore we say, as Slavery is abolished, you can no longer hold your ascendency in the Halls of Congress by counting one white men in the south equal to three in the north; thus giving the south the privilege of sending 42 rebels to Congress, based upon four millions of blacks, to offset the votes of 32 loyal men, based upon four millions of whites. The Rebels and Copperheads claim that the moment they laid down their arms they were entitled to representation in Congress, though their hands were red with blood of hundreds of thousands of men. They had a right to take part in the legislation that should design and punish treason. And should also take part in all laws that were to make the future secure.

That, though Slavery was abolished, they should aid in making the laws that should govern the Freedmen, and keep in force their slave codes, fit only for a barbarous age. And finally, that no law could be legally passed while they had no hand in enacting it. Wade Hampton of South Carolina, demands his seat in Congress by the side of John A. Logan, upon the same terms and same conditions. Logan had vanquished him in the field of battle, has upheld the Stars and Stripes, but it gives him no precedent in the Halls of Congress over Wade Hampton, who upheld the Stars and Bars of four long years.

Citizens and soldiers, this is a plain statement of the case. There is no pettifogging it. You are required to fight the battle of the Republic, spend millions of treasure and cover the land with your blood. When this is done you may, if you are lucky enough to be elected, have the high honor of sitting in Congress with some Southern Rebel, who by law holds his seat upon one white vote, while you hold yours by three. And you count in Congress one-third less than Stevens, or any other rebel who may be there. And in this election you are to decide whether you are a man, or only the third of one as compared to a rebel whom you have whipped on a score of fields.

You are to decide whether the loyal men of the north and south are to be protected in this Government, whether the principles

(13)

you fought for, and which have been made sacred by the blood of your comrade, your brother, father or son, shall be the law of the land, or whether the policy of Andrew Johnson and every rebel in the land shall be the law. These principles are no political trick- they are the solemn conviction that we got upon the skirmish line, and were dinned into our ears by rebel cannon and musketry. As we stood steadfast in the field, so let us now firmly adhere to a right settlement.

We achieved that victory, and the man is a child or a fool who tells us rebels have the same right that loyal men have. He is an ingrate who demands of us that we shall have no security for the future, and a traitor when he tells you that the Philadelphia Convention is a more loyal body than Congress. Do they suppose they can fool us by putting the gag on the mouth of rebels in that convention? That was the way secession was made successful. Every convention that took a state out of the Union did it in secret caucus, and I tell you they are not to bring rebels into the counsels of the Nation by the same machinery, to the exclusion of loyal men as they endeavored to do at Philadelphia.

We know that today all over the south the only emblem they acknowledge is the rebel flag. The Stars and Stripes are never raised except to be mobbed. A Union man cannot live there and speak freely his sentiments. Freedmen are now hunted down like dogs; and if it were not for the Freedmen's Bureau and Civil Right Bill, they would today be slaves or in their graves. Look around you and tell me what loyal men in the south today supports the policy of Johnson and the Democracy? What one of all the southern men who joined our army, lost their all, had their houses burned down and homes devastated, and faced more than death ten times over for our cause is today that recipient of a favor or any protection from Andy Johnson's policy? Point me to the single one who supports it. I raised as many or more loyal regiments in the south as any other one officer, and it makes my heart ache to receive the appeals I do from all parts of the South from those officers and men who so gallantly fought for us, both black and white, who went back to their homes, and as they say, cannot, under Andy Johnson's policy, live there any longer. They appeal to me to live up to my promises to them, that when the war closed loyal men should rule the south. Loyalty should be made respectable and treason disgraceful.

How is it today? The soldiers of Lee, Beauregard, Johnson, and Hood are now the dominant party from the Potomac to the Rio Grande. They elect each other to office in spite of Johnson's disfranchising Pardon Proclamation. And if Johnson pardons, all right! if not, it is the same. For let me tell you they care less for Johnson than we do, and you and I ere long will have to protect him and the Government from their encroachments. The policemen in all the cities of the south murder and shoot any one but a rebel with impunity, and they ruthlessly arrest every demonstration of loyal white or loyal black in asserting the rights of American Freemen. School houses are burned, teachers driven off, and the work is generally ended by cheers for Johnson and Davis. "My policy" they say has achieved four victories already, and it is a wonder that they were not announced and cheered in the Philadelphia Convention. They are Kentucky, Arkansas, Memphis and New Orleans. They are the legitimate fruits of Andy Johnson's policy, and now that they have all harmonized at Philadelphia, you will soon hear of more just like them, and every copperhead paper in the land will justify it by declaring the simon pure loyalists of the South incited the riot by daring to meet together and endeavoring to obtain the principles they fought for in the war.

Gentlemen, we must convince the south and the copperheads that revolutions never go backwards, that Emancipation is an unchangeable fact; that the civil rights bill is the law of the land; that the rights of every one, the humblest American are guaranteed and sheltered by the Constitution, and must be maintained in every state in the Union, yes, in every town against all gainsayers. That the days when the loyal man, be he black or white, cannot speak his sentiments

freely and boldly everywhere have passed away forever., and that loyal people alone, those who conquered the right are the only ones who shall prescribe the laws for the future safety and security of the Constitution the Union and the Government.

It has then become imperative that those who stood for Liberty and Loyalty, for the right of the Union to exist, and of man to be free, should organize, work, and leave no stone unturned to secure this great object, and make the Constitutional amendment the law of the land. Andrew Johnson declares that the sayings and resolutions of a lot of rebels, office-holders and petty politicians were equal to the Declaration of Independence! He attacked the loyal branch of the Government and insulted every soldier in the land by delcaring that with the machinery of the Freedman's Bureau, the Civil Rights bill and the Army he could have made himself Dictator of the United States. Men who drew up and enforced the Declaration of Independence did not, twelve months before hand, commit open treason nor insult the people or the soldiers who sustained and enforced it. They did not look upon the American army as slaves to be bought and sold by the bread and butter that Andy Johnson has to distri ute, and let him carry out the policy that he foreshadows of overriding the laws of the country, and he will see where the supporters of the Declaration of Independence are. There will be very few of them found in the Philadelphia Convention.

There are soldiers here. I appeal to them, by all they hold dear, not to violate their honor given to their comrades now dead, that if they fell, you could still uphold the flag, the principles it was the emblem of, so long as life was left you. And do you suppose that if the twenty thousand Iowa dead could rise out of their graves today, that they would admit that they had fought for the past alone, and not for the right to secure their government and their country in the future? I am not blood-thirsty. I want no more blood shed. No more confiscation. No more hard words. But I do want, and will have the right for loyal men to rule the country and rebels take a back seat. I fought for that right. You fought for it. We sustained it bravely, victoriously on the battle-field and so sure as the sun rises and sets we will sustain it at the ballot-box.

For all men struggling for freedom for themselves or for thei country I give my sympathy, and so far as is in my power, my aid Irishmen, Germans, all nationaltieis seeking liberty for themselvesaann their country should plant themselves firmly on the platform of Liberty to all, and equal justice throughout the land, and they will receive the support of all loyal, liberty-loving citizens.

The action of Congress demanding the release of all Fenian prisoners in Canada and the States, and the amendment of the neutrality laws, speak the sentiment of the loyal men of the country. I leave this to speak of another phase of this question; that is, of a more local interest. It is well known that my life before the war was spent in pushing forward the internal improvements of the country. Today I am engaged in that great work, the Union Pacific Railroad. A work that the Republican party made part of their creed, and which every rebel in the land opposed. A work that for fifteen years I have struggled to help accomplish, and today I can begin to see the beginning of the end. This very work alone should hold in power a party that had sagacity to see its importance and the nerve to overthrow all the old prejudices of policy and Constitutional objections heretoforeurged against it, and made it a military necessity that the two oceans should be joined by an iron band. They provided the means doing away with the precedent that all our appropriations for defense should be spent on our seaboard alone. I look upon the future success and greatness of Iowa as depending in a great measure upon the speedy completion of her system of railroads. They alone can settle and develope our vast prairies and put us within easy r reach of a market. And their success is based almost entirely upon the credit of the country upon the reliability and stability of her national debt. A debt contracted to uphold this Gve nment, and one which was provided when created that it should not be taxed. But already we see the threatening cloud that is to attack it, if Rebels come to power. Kentucky, Indiana, Ohio and I believe nearly all Democratic Conventions declare that the debt shall be taxed. Rebels says repudiated. Taxation of it now, when the conditions upon which it was raised is considered, is nothing more or less than the first step to repudiation. Let this be done and down goes all securities; for Government stock heads the market and is its pulse. Confidence lost in them, your railroad se- curities and become dead and your roads must stop.

- 1127 -

Is there any one here who desires the North-western, the Missouri and Mississippi, the Burlington and M. R. R. or any road now in process of completion or in contemplation obliged to hold up because rebels and copperheads have forced the negotiation of the bonds and stocks to stop? Will you vote for a party which upholds the repudiation of the National Debt, which is as sacred as the blood of the men who died for the same cause that it was created? I hope not.

Gentlemen, there is not a home in all our land but what has felt the effect of this war- no one but can look back to some vacant chair around the fireside A father, brother or son is missing; he comes back to you no more; his bones are bleaching upon the battle fields of the south. What are all the emblems of sorrow and grief that we see all over the land for? Was it that Rebels or loyal men should rule this land? Was it that the men who sped the rebel bullet that laid your friend low should take his seat in Congress, unpardoned, unpunished, a defiant rebel still, alongside your friends and comrades and make the laws to govern our country and prevent treason in the future, and be a standing insult to your grief?

If it was, then vote for Andrew Johnson, his policy, and sustain the Philadelphia Convention. Did your comrade not die rather than his country should be saved, and ruled by loyal men, that treason should be made odious, and traitors forced to stand back and live under the rule of loyal men? If it was, then vote the Union Republican Ticket, and sustain that noble Congress which shall hereafter receive the thanks of a grateful nation, for their ability, their steadfast defense of the right, notwithstanding the promises, blandishments and bullying of the Executive Power."

1866

On June 27th, from Washington, Hon. S. J. Kirkwood wrote me saying: You are "I congratulate you heartily, and your district and the State. good on a hard fight and I always gave you that credit."

On June 18th, M. L. McPherson who was a candidate before the convention wrote me as follows:

"Since the terrible strife of the 18th inst. in which we figured to some extent and in which you were successful, I fully intended that if I could not get the nomination myself, to nominate you, but had I made definite arrangements with you, I should have always felt that I had sold out. I have no such qualms now, for I was fairly beaten and if it is in your power to give me a position as intimated by you, I will accept it with thanks. I was surely beset by Mr. Casson before the convention with promises, which at a proper time I will exhibit to you, if I would only arrange so as to carry my strength to him, and during the convention, I have it from a reliable source, I could have commanded thousands by going to Mr. Casson. It is enough to say that I gave you the nomination in preference to him and his promises."

On July 6th, Col. J. W. Barnes, who had been my Adjutant General through all the war, wrote me the following letter:

Warsaw, July 6, 1866.

"It is so long a time since I have heard from you that I am at a considerable loss to know where to address you. The newspapers reports lately exhibit a strong tendency to mislead one as to our probable locality. At one time I see you as Chief Engineer of the Pacific Railroad, your head-quarters probably at Omaha. Again, Iowa has selected you to occupy Casson's place in Congress. Query? Why should Iowa go to Nebraska for her Congressmen? The latest report noticed is that Congress has confirmed you as Consul to Bremen. If by this time you know who you are, or what you are, or where you are, you must be extremely fortunate. As for me, I am like the boy after the battle of Chancellorsville; my mind is 'tore up.' When I saw that you were made Chief Engineer of the Pacific, I nearly made up my mind to apply to you for some nice fat situation this fall or next spring; some place where there was plenty of work to do, well paid for. I

1128

(16)

should count on you in favor of a reasonable good tariff to the exclusion of our very neighborly neighbor, John Bull, and to the benefit and advancement of home manufactures. Somewhat of self interest, perhaps mixed up in this, but I believe it to be the sound policy for the greatest advancement of all classes of our own industries. In case you take a trip to Bremen, I can only wish you all manner of success, and a very great amount of pleasure.

What has become of Hoxie? I have not heard from him for almost an age. Hope he has not enlisted in some Fenian Brigade to aid in the attempt to transfer Canada to this side of the line. Did you notice with what a native grace and dignity Sweeny, Comdg. the Armies of Ireland? (Erin go brach) allowed himself lately to be arrested? Wonder if it required so much sword and sash to effect the capture as it did once before on a certain time.

We are progressing fairly with our building operations. The mass of rock and mortar is beginning to assume shape size and proportion. We are making an effort to get into operation this fall, and are confident of succeeding. If you do not start for Bremen too soon, I might fit you with a suit of jeans, to show the "blasted furriners."

General James W. Tuttle of Des Moines was the Democrat in my district nominee for Congressman on a Copper-head Platform. This caused a great deal of astonishment to his friends in the Army, but even when in the army, in the latter part of the war, he was known to be a Democrat. As we were personal friends and as he was an excellent soldier, I made known immediately my wishes that nothing in the campaign should be said derogatory to General Tuttle; of course, they attacked him severely as being a copper-head candidate but no one that I ever knew of made any personally reflection upon him or made any criticism of him, and in his campaign, he was always careful to speak in the highest terms of me.

The Democrats raised the question against me of promotions (the 4th Iowa) in my regiment from one company to another as against the wishes of the officers and men. I sent this to General Williamson and he wrote me in relation to it on July 22nd, as follows:

Fort Smith, July 22nd, 1866.

"Your letter of the 8th has just now been received and in reply I have to say that my recollection of the promotion of officers in Co. G. 4 th Iowa Infantry is as follows:-"While encamped at Cross Hollows and only a few days before the Battle of Pea Ridge, Captain Hopkins of Co. G. resigned and the company held an election to fill the vacancy and 2nd Lieut. Randolph Sry was elected Captain over E. C. Miller, 1st Lieut. I know that you recommended Capt. Sry and that upon your recommendation he was promoted. You had previously recommended Sergt. E. C. Miller for 1st Lieut. over Sry. Vice Hopkins promoted to Captain. Vice Rice resigned; Miller having been elected by his company over Sry, thus yielding to what seemed to be the wish of the company as you always did in that and other companies in making promotions. If you had wanted to have put any member of Co. E. into Co. G. as an officer, there was nothing to have prevented you from doing it. In the matter of promotion of color-bearer, Sergt. Fred Teale to be 2nd Lieutenant of Co. G. I only know that while I was Adjutant of the regiment, I received a nomination from the Governor of the State for Sergt. Teale to be 2nd Lt. of Company G. I supposed that you had recommended him for the place. When the commission came, I think Capt. Cummings was in command of the regiment and ordered Teale to duty with his company.

Teale was a brave and good soldier and deserved promotion, but Co. G. thought that he should not have been promoted into the company as it prevented one of their own number from securing the appointment, but surely no member of that company could afford to allow

(17)

such a matter to control his vote, and especially could no member of that Company allow the promotion of a brave fellow soldier over him to induce him to cast his vote for those who had fought him more bitterly and effectively and less honorably than armed rebels in the field.

I think I may be able to get up into Ringgold Co. before long, certainly before the election; nothing but sickness of myself or family will prevent me from being there by the 1st of September. Hope that everything will go smoothly and as you desire it."

From throughout the district during the Campaign, a large number of letters were written to me from every County, all speaking favorably of the vote I would receive and of the gain of votes to the Republican party. I did not answer any of these letters personally as I was on the plains and on the go from day to day; most of the letters I did not receive until long after they were mailed. A great many of them contained requests for positions.

During August General Tuttle visited Washington and Mr. Palmer wrote me that he had returned with full authority to control federal appointments in the district for his own purpose. This showed that Johnson and his administration were taking an active part to defeat the Republican nominees. This did not alarm me for from the reports I had received from the district, I knew there were a great many Democrats who would vote for me instead of General Tuttle.

The persistency of the Republicans in trying to stir up trouble in the 4th Iowa, to get a sentiment in the regiment against me, had been unsuccessful and I wrote Col. S. D. Nichols who was a Captain, and finally became Colonel of the regiment and he answered me on August 7th as follows:-

1861  
Des Moines, Iowa.

"I have just received yours of the 8th inst. It came to Panora while I was attending Court at Des Moines and was forwarded to me by my wife at the same time I started for home. I have just returned to Des Moines and therefore just received it.

In regard to Teal and Sry--It is so long ago, that the circumstances attending their recommendation and promotion have almost passed from my memory. I think, however, it is as you state it. I think Sry was recommended by you for Captain and also Teal as Lt., but whether his commission was Lt. of Co. G. or whether it was in general terms, I do not remember. I remember this--that Teal was a brave and efficient officer and was finally wounded at Bentonville, N.C. nobly performing his duty.

In regard to your prospects for an election- in my mind there is not a question of doubt. My county will give you an increased majority, so will Madison. I think Dallas will also, and I believe the same is the case of nearly every county in the district. Here in Des Moines, they will cut you a little. I believe, however, that your majority will run nearly up to the majority last year, and I have investigated the matter considerably. I think you will not lose more than seventy-five votes at the outside, and these will be fully compensated by the increased majority that the County will give. The excitement here in reference to the matter brought into the Congressional convention as claimed, has nearly all died away. A few individuals not very reliable at any time, are still gassing about it but most of them

1130

will drop into the traces all right before the election.

I understand Tuttle is going to speak in Dallas next week, but can't vouch for it. He claims to be sanguine of an election. If so, I am satisfied he is the only man here who thinks so. I cannot hear of any money offered by his friends on it.

I have intended to canvass this Judicial District myself this Fall, and shall speak at most of the County seats any way, but having been appointed Dist. Atty. and the fall term of Court now being in session, will debar me from making an extensive canvass. You need have no doubts of the result this fall. The main work will be done at home. Your friends are alive and not sleeping, and you are bound to be elected. Kasson will be along soon and will clear out Frank Blair badly."

On August 8, 1866, Gov. Wm. M. Stone, from Knoxville, wrote me as follows:

"The State Executive Committee have published a list of appointments for me, which embraces six points in the 5th Congressional District, commencing at Winterset on Wednesday next, going from there to Indianaola, Osceola, Chariton, Garden Grove and Corydon. There, with one exception, are the most populous counties in the District and should be well attended to.

So far as the State ticket is concerned, there will be but little effort made by the opposition, and movements in that direction will be only a feint to conceal their real designs. What the President and his coadjutors desire is, to secure a majority in the next Congress embracing the members from the South and Copperheads north with a few of "My Policy" Republicans. To do this, they must secure the return of from 15 to 20 members from districts now represented by Republicans. If by hook or crook they can secure one or two of these, from Iowa, so much the better. Your's and Wilson's districts are the only ones in which they will make any decided efforts.

It will not do to say that the District is strong Republican, and therefore you are safe. You may be safe, but then you don't wish to be elected to Congress by a bare majority. You want to be sent there by a majority so large and emphatic that it will effectually rebuke the corrupt influences and means which they have resorted to in order to secure your defeat. A small majority, while it may answer the purpose, will not give you the prestige which you would have, and ought to have by a large one.

I wish to suggest that you meet me in Winterset and go around to the other points named. In my judgment, it is not one hour too soon for your canvass to begin. It is sometimes advisable to take the initiative and move before your adversary is ready, and if possible, place him on the defensive. Much good can be accomplished by your personal presence. It is well known that you are not a professional stumper, that your tongue is not as trenchant as your sword, and that you have not, like many others, made politics your business; but there is much encouragement to be derived by presenting yourself in the flesh to those whose suffrages you solicit. You can put the machinery at work, and have your friends at the different points well posted. Let the world know that you have moved on the enemy's works, and begin the campaign in earnest. Whether you come or not, I shall do every thing in my power to advance your interests."

I received several communications, one especially from Hawkins Taylor proposing to show up General Tuttle's cotton speculations, but I declined to have anything to do with it.

There was continual pressure upon me to come into the district and accompany Senator Kirkwood, Senator Harlan and others in their speeches but they seem to have forgotten that when I allowed myself to become a candidate it was upon the condition that I could take no part in the canvass.

(19)

(131)

On August 13, 1866, Mr. J. N. Dewey of Des Moines wrote me in relation to this matter as follows:

"I enclose you a communication from Gov Kirkwood covering one from Hawkins Taylor at Washington. Palmer has one of a similar character from Taylor, so I send you this that you may take such steps as you think proper towards following up the lead. I met Gen. Tuttle Saturday night and he seemed anxious to find out who was going to canvass the district for you. I told him that I didn't think there would be any necessity for any one going on to the stump, provided he and you would go over the district together on "dress parade." I thought he seemed a little nervous. Allow me to suggest that it is quite time that the programme for the campaign was made up. Kasson arrived home Saturday night. His friends are to honor him with a serenade tonight when he will make a speech. He has been in public life for the past five years, but never until he got the class and partook of the holy sacrament, did they think it necessary to so honor him. Can you not go with Kirkwood? If possible, it seems to me you would do well to come here, via Winterset bringing Fuller along. Fix up the programme; have it published, and dash in by the 1st of Sept. You see the Gov. stipulates to be let off with ten days and his desire is to begin about the 10th of September, not later."

There was also a great desire on the part of the friends of Mr. Kasson that he should stump the district while ~~on~~ the part of those who were opposed to him, there was great opposition; they thought that his advocacy of Johnson would create a disturbance that might be detrimental to the party. I left this matter entirely in the hands of the Committee who had charge of the campaign. My own opinion was that it was not good policy for him to take any part in the campaign.

On August 17<sup>1866</sup>, on this question, I received the following letter from George C. Tichenor:

Des Moines, Iowa.

"Tuttle was at the supper given to Kasson last night and made a speech. Since Kasson came home he has been in frequent close conclave with Tuttle and some indiscreet Democrats are boasting that there is an understanding by which Kasson is to beat you if possible. Now I tell you, it won't do for you to allow this d---d scoundrel to go on the stump under the auspices of our committee, and if he goes on himself, he must be followed watched and met on all occasions. I have got into the County Convention which meets here tomorrow. The Convention will be composed of (a majority at least) of your original friends and I will see that steps are taken to canvass and thoroughly control the party in the country."

You should have it arranged to get in every vote possible from the N.W.R.R. & U.P.R.R. and should appeal to your friends of all parties to support you, as a bitter local fight is being waged against you here for local reasons. You ought to come over here; indeed you ought to have gone with Stone. Since you seem, however, inclined to take the advice of Hoxie and others who are away and know nothing of matters here, and to disregard the advice of others of your friends here, I do not feel much encouraged in offering you any suggestions or advice."

On August 23rd<sup>1866</sup> I received the following letter from Thomas F. Withrow on Kasson's speech and the decision of the committee not to put him in the canvass:

Des Moines, Iowa, Aug. 23, 1912.

"Yours of the 21st came to hand this morning. Cutts was here a few days ago and declared most emphatically that he would not put Kasson on the stump. Fuller is here now. He told me last night that he would put the whole matter in Cutts' hands and make no appointments for anyone. I hope that snake is "skotched."

You had not read Kasson's speech when you wrote, had you? Kasson's friends here were angry because it was not published sooner, and they are now chagrined because it is published. It is sugar-coated Andrew Johnsonism, and effectually concludes all his professions of radicalism. It has closed the mouths of more of his noisy friends here than anything else that has been done, I have heard of but one man who has read it and claimed that it was radical.

His friends are now giving it out that he has no desire to canvass the district, but that he will make speeches through the State upon special invitation. Some of them are anxious to get him for Governor next year.

It is fortunate that Dodge cannot canvass the District. I understand that in some of the counties they are trying to run the railroad question against him. If he could go through the district, he would arouse enthusiasm among the boys and get them to work."

Col. J. H. Baker who was my Provost Marshall when I was in command of Missouri was stumping Missouri and wrote me the following letter in relation to conditions in that State and offered to come into my District and speak for me, if I desired:

M.  
Booneville, Aug. 26, 1866.

"I was on the eve of writing you to congratulate you on your nomination when your very welcome letter came to hand. Nothing would afford me more pleasure than to aid you in the canvass, but just when, I cannot at this moment determine. I am under a large number of engagements in this part of Missouri, but will make no more at present, so as to make time to visit you.

I have nearly forgotten whether Iowa has her election in October or November. On account of the prevalence of the cholera, raging very badly in and about St. Louis now, I would like to postpone my Iowa visit until after frost. I have already aided McClury a great deal and he cannot complain.

Missouri is in a bad condition in most places. If we can have the Registry Law, even in the main enforced, we shall succeed. I believe that it will be.

Blair in the outset of his canvass did all in his power to breed a reign of terror and bloodshed. He was here. I had known him well. He took me to one side and told me that "Blood shall flow in revolution before the Radicals shall continue to hold power in Missouri." From that hour I have done everything possible to aid the Radicals by inspiring in this vicinity a thorough organization.

What you say of Gen. Sherman is indeed welcome. I have not seen Governor Fletcher since his arrangement with Hancock. He and Oglesby spent several days at my house not long since. Then he was very hopeful of the success of the campaign. We were devising a very spirited plan for the fall campaign but the cholera will interfere largely. Our mutual friend, Gen. Ewing, has gone with the Copper Johnson party. Though a good man, he inherits a very large vein of conservatism from his father.

I most heartily congratulate you upon your nomination, and anything I can do to aid you in your canvass will be done with a whole heart. What is my best course to reach Council Bluffs from here?

My last published engagement is at Kansas City on the 20th of September. I could waive that and one or two of an earlier date, if I find nothing to interfere. Present my regards to Mrs. Dodge and say to her that I expect a cup of tea yet out of that silver tea set."

1133  
(21)

III.

On September 6, 1866, from Springfield, General R. J. Oglesby wrote me as follows:

"Until today, on my return from a long visit to Indiana, I supposed I had promptly replied to your letters of the 3rd inst. I beg your pardon, General, I fully intended to do so at the moment. Your letter was taken from my private table by one of the house girls, and was found after my departure for Indiana.

I am truly glad you are to go to Congress, and am rejoiced we are to have your effectual aid to defeat the base schemes of Johnson and his bad associates. They are all very, very dangerous men, and none but the truly loyal should be placed in high and responsible positions to disarm and disable them. I cannot now say whether I shall be able to help you or not. I believe I have appointments constantly up to the 29th of September. I fear I shall not get time to go over and see you; if, however the least opportunity offers, you may rest assured I shall avail myself of it and do all I can to help our good and noble cause. It is the cause of our country and human liberty no less and we must defend it at home as we did in the field."

On September 8, 1866, from Oskaloosa, Mr. M. E. Cutts, the Chairman of the Republican State Central Committee wrote me giving the list of appointments in my district as follows@

"I have made out appointments for every county, I believe, in your district for Mr. Stibbs, Gov. Kirkwood and Mr. Nourse. Judge Cole will also meet Mr. Stibbs at several of his appointments, so that, with the local speakers, I think the district will be pretty well canvassed.

Your majority will not be less than two thousand, and I think will be nearer three than two. I have authorized Mr. Fuller, Chairman of the Central Committee to make out appointments under auspices of the State Central Committee for the local speakers who are to speak at more than one point in each county. I have done this for the reason that he is better acquainted with the proper plans in the several Counties for such meetings. Gov. Kirkwood and Judge Nourse will meet at the Bluffs on Saturday next, when I trust you will have a grand meeting with good results. Kasson's friends are importuning me every day to put him on the stump in the District. It is a very strange fact that men will become so infatuated over, and about that man, that they have gotten so that they consider him as composed of something more and higher than ordinary humanity and in their eyes his faults, defeats and short-comings seem to be considered commendable virtues. I certainly think his Des Moines speech settled the question of his political soundness, and have no difficulty in concluding that no man can with my consent be put forth as the exponent of Republican principles, who finds in those principles nothing to approve and commend but much to condemn. It will be time for him to start on a missionary tour when he shall have been converted and become regenerated.

Your enclosure of \$100.00 was duly received."

The above \$100 referred to, is the total amount of money which I spent in the canvass.

On September 10, 1866, Mr. John A. Mills, of Lewis, Cass County Iowa wrote me that he was confident of a large majority in that County. He said I would receive a great many votes from the Democrats on account of my connection with the Union Pacific Railroad and for the work I had done for the railroads in Iowa.

(22)

On September 30, 1866, Mr. Kasson made a speech at his home town and Mr. Isaac Brandt, a personal friend, wrote me in relation to it as follows:

Des Moines, Iowa.

"We are all feeling better today. Mr. Kasson made a speech yesterday at the Court House. He took radical grounds and unqualifiedly pledged his support for Gen. G. M. Dodge and the whole Republican party. The Copperheads came out in a body, many of their leaders taking seats inside the bar, evidently expecting solid comfort. But, Oh God! what a lengthening of countenances when Mr. Kasson announced that he would give his undivided support for the Republican ticket.

Those men who were near the door left in disgust, and those who could not very well get out muttered curses, deep-toned and long. After the meeting adjourned they raved like madmen, swearing that it was a trap set by unmitigated scoundrels to get out a Democratic audience. I feel confident that things are working well and I believe now that we will double the majority in this county as I wrote you before."

On September 25, 1866, from Des Moines, I received a letter from George C. Tichenor urging me to come to Des Moines, as follows:

"There is to be a mass meeting here on the 29th at which Kasson speaks, and his friends urgently request that you be present, as they say it would effectually heal all old sores. You can do as you think best. I know it would gain you some votes to come if you only stayed a single day and would stop a day in Dallas and one in Guthrie.

Your speech at Magnolia is having an excellent effect - all like it, and it would do you great good to be here on the 29th and deliver it. I have some fears about the Stage and Express Companies. Hooker will do all he can, but if Joe Shepard can come through the District it will do you great good. They are all wrong now and you better write him and Hooker and Hugh T. Reed. You will have to look well to the Irish on N.W.R.R. and get all possible help from U.P.R.R. The devils here in Dallas are bound to cut you some."

On September 29, 1866, from Des Moines, I received the following letter from Gen. J. A. Williamson:

"I regret that I did not see you when I was out at your place. Kirkwood and I went the rounds and spoke at the places advertised for Kirkwood. We found everything all right. I saw most of the members of Co. G. and not one of them will vote against you. Dave Marshall was the leader of the opposition but is now reconciled and will do all he can for you. You will be elected by a large majority, larger than any man ever had in the District.

I leave here for Arkansas on Monday but think that I will be back here in about six weeks. Had I seen you, you could probably have suggested some business for me in your town, or on the U.P.R.R. Write me at Fort Smith any time next month.

When I left the Bluffs I thought I would come back that way from Fremont County, but when I reached there, thought best to keep on. If I had returned that way, was going to try to get a house there to live in, but have now concluded to wait until I get my family back here and then will see about it. Many persons here think it doubtful what Kasson will do. I think he will come out tomorrow strongly radical. We had a mass meeting here on the 20th and among the Irish the best feeling prevails."<sup>2</sup>

All of these letters did not reach me until long after they were written as I was in the mountains at that time in Colorado. On October 10th, the day of the election, I was engaged in saving my party and getting them down into a mill which had been erected there by Fitz John Porter, that I forgot all about the election until Henry M. Teller, who was our Attorney

(23)

at Central City, sent me a large number of dispatches giving the results of the election and showing a very large gain in all the elections over Tuttle. Decatur County went against me and a dispatch from C. J. Wilson gives the result:

"We have met the enemy and we are theirs, as we expected to be, but by a largely decreased majority. This county went Rebel last year by about 170; this year we are beaten only 18 to 52; eighteen on County and forty-two on State Congressional and Judicial Candidates."

N. W. Powell of Afton wired that the Majority was 110 to 41 last year. W. Hartshorn wired that as far as he had heard, they had given me 631 votes to Tuttle's 411, a gain of 146 over the last year. From Bedford, P. E. T. Smith wired:

"We are all jubilant and Tuttle's men are all in their holes."

Samuel S. Forrey from Leon wired that Col. George Burton of the 4th Iowa Infantry voted against me and did all he could to injure my ticket. Burton denies this charge. L. W. Willey of Plattsburg wired:

"Taylor County has done nobly for the Union cause."

W. C. Kennedy of Osceola, wired that Clark County was 450 Republican majority. The Majority last year was 201. Nothing like this was ever done before.

Warren S. Dungan wired that Lucas County had given me a majority of 200 stating that I had more than doubled the majority in Lucas and Clark Counties.

Tichenro wired from Des Moines that Polk County had given me 670 majority; that the bets had been made that Tuttle would get 1000 majority and that I would carry the district by over 5000. Page County gave me 232 majority. Captain J. R. Reed wired that the majority in Dallas County was 421.

On October 15, 1866, Governor Kirkwood wrote me as follows from Iowa City:

"I have not heard anything especially from your district since the election but I am so well satisfied of the result from my trip through it that I feel entirely safe in congratulating you on your election by an overwhelming majority. I think we have knocked the socks off old Andy Johnson effectually all over the country."

I am sorry you could not be at Council Bluffs when I was there speech-making, but I am well aware that you would have been there if you could. I wanted to see you especially in regard to Gen. Williamson. He is determined not to remain at Fort Smith and is now either at that point preparing to return or is on his way back with his family to Iowa. You are probably well aware that he is in quite limited circumstances, and having a family to support he is naturally desirous of securing some employment.

(24)

I suggested to him that possibly your position on the Pacific Railroad might enable you to furnish him some paying employment that would suit him. You know him as well, or better than I do, and know what he can do. I esteem him highly and have a very strong desire, on account of his services as a soldier, to see him do well. Can you do anything for him? You will do me a personal favor by giving him a position if in your power.

I would have gotten a position for him from the President, if he had not gone back as he has on all the soldiers and every one else who does not believe in his gospel, but I could do nothing there for the reason that I do not believe in his gospel, and Williamson could do nothing for himself for the same reason. I should have written you on the subject before this, but postponed doing so, expecting to hear of your return to the Bluffs. I have not heard yet, but presume you must have returned before this. Please let me know if you can help him in any way. He went with me on my whole trip, spoke at every point and in some localities did especially good service.

I am surprised and delighted at the success you have had in building the Union Pacific road, and my feeling is that of the whole country. It is one of the greatest achievements of the day."

On October 28, 1866, George C. Tichenor wrote me on the result of the election as follows:

Des Moines, Iowa.

"I have ~~read~~ your letter with much satisfaction. Now, that the battle is over and the smoke clearing away, we are enabled to see distinctly the more peculiar outlines and details of the engagement.

There were but few of Kasson's friends who took any interest in the election. Some of his most ardent friends worked hard against you at the polls; others did you all the harm they could quietly,

while others simply voted against you, but we watched them all so closely that we knew their maneuvers and arrested their action before they could do much harm. They had the ground thoroughly "mined" and nothing but constant work and watching kept them from doing great mischief.

I say, not egotistically, but with satisfaction, that I am proud of the results of my labors during the canvass. We headed them in every game, and now have them on the hip for the future. I think Kasson would have been gratified at your defeat and doubt not would have worked openly against you if his courage had sustained him. I doubt not he did you all the harm he could with his tools, as here, and at Adel, Indianaola and some other places where his tools lived, you ran behind the ticket. You had quite a number of democratic votes in all these places, so you see Mr. Kasson's ear marks quite plain, as your friends in each place were advised of the game and worked to make up losses by democratic votes.

There is a general desire on the part of your friends throughout the district to see you and I think it your duty to spend some time in visiting through the district. No man ever had warmer and more devoted friend<sup>4</sup> than the campaign has shown you to have, and this you should bear in mind and foster by attention.

We are all regret that you cannot take part in the next winter's session, as it will be the most trying epoch in the nation's history, yet if the Congress of this winter will provide for the immediately convocation of the new Congress on the adjournment of the old, many dangers may be avoided and disasters circumvented."

It was my intention to attend the reunion of the Army of the Tennessee but I found that my engagements were such that it was impossible and on November 1st wrote General Force the following letter:

"It has been my intention, up to today to be present at the reunion of the officers of the Army of the Tennessee, but I find my engagements are such that I must forego that pleasure. Though absent, my thoughts will be with you, and nothing would give me more pleasure and satisfaction than to meet our old chiefs, Grant, Sherman, Logan and Howard, and see marshalled with them the heroes who so often followed them to victory. One alone will be missing, the noble hero, General McPherson. None

Council Bluffs, Iowa.